

July 1978 40p

AIRFIX

MAGAZINE FOR MODELLERS

Inside: Voodoos of the 81st TFW, QF 2 pdr Mk VIII, the Hanover air show, 'camofoliage' and Austrian figures



Uniforms of the Heavy Brigade at Balaklava

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MAGAZINE FOR MODELLERS

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On the cover

Bryan Fosten's superb cover painting this month portrays a regimental group of the Heavy Cavalry regiments in the Crimea. The mounted officer is from the photograph of Major Burton of the 5th Dragoon Guards. In front, from left to right, are: a Corporal of the 1st Royal Dragoons in full dress prior to embarkation; a trooper of the 6th Dragoons; a trooper of the 2nd Royal North British Dragoons; and an officer of the 4th Royal Irish Dragoon Guards in the simplified coat of arms favoured by many officers in the Crimea. It had shorter tails and only one loop on the cuff.

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Great Britain				Germany			
*King Edward VII	8	1905	Pre Dreadnought	*Admiralty R	(x2) 39	1916	Destroyer
*Lord Nelson	2	1907	Pre Dreadnought	*Mons	(x2) 112	1915	'M' Class Destroyer
*Dreadnought	1	1906	Dreadnought	*'L' Class	(x2) 16	1913	Destroyer
*St. Vincent	3	1909	Dreadnought	*'I' Class	(x2) 29	1911	Destroyer
*Bellerophon	3	1910	Dreadnought	*'H' Class	(x2) 20	1910	Destroyer
*Neptune	1	1911	Dreadnought	*'G' Class	(x2) 8	1909	Destroyer
*Colossus	2	1911	Dreadnought	*'E' Class	(x2) 22	1904	Destroyer
*Orion	4	1912	Dreadnought	*'D' Class	(x2) 10	1895	Destroyer
*Agincourt	1	1914	Dreadnought	*'C' Class	(x2) 32	1896	Destroyer
*King George V	4	1912	Dreadnought	*'K' Class	(x2) 17	1917	Destroyer
*Iron Duke	4	1914	Dreadnought				
*Erin	1	1914	Dreadnought				
*Canada	1	1915	Dreadnought				
*Queen Elizabeth	5	1915	Dreadnought				
*Royal Sovereign	5	1916	Dreadnought				
*Invincible	3	1908	Battlecruiser				
*Indefatigable	3	1911	Battlecruiser				
Lion	3	1912	Battlecruiser				
Tiger	1	1914	Battlecruiser				
Repulse	2	1916	Battlecruiser				
Hood	4	1918	Battlecruiser				
Courageous	2	1916	Battlecruiser				
Furious	1	1918	Cruiser/Carrier				
Emerald	1	1920	Light Cruiser				
Cardiff	5	1917	Light Cruiser				
Comus	6	1915	Light Cruiser				
Castor	6	1915	Light Cruiser				
Arethusa	8	1914	Light Cruiser				
Fearless	3	1911	Scout Cruiser				
Blonde	4	1911	Scout Cruiser				
Chester	2	1914	Prot. Cruiser				
Nottingham	3	1913	Prot. Cruiser				
Southampton	6	1912	Prot. Cruiser				
Weymouth	4	1911	Prot. Cruiser				
Glasgow	5	1910	Prot. Cruiser				
*Defence	3	1906	Armoured Cruiser				
*Achilles	2	1905	Armoured Cruiser				
*Black Prince	2	1904	Armoured Cruiser				
*Argyll	6	1903	Armoured Cruiser				
*Monmouth	10	1902	Armoured Cruiser				
*Good Hope	4	1901	Armoured Cruiser				
*Cressy	6	1901	Armoured Cruiser				
*Diadem	8	1898	Prot. Cruiser				
Edgar	7	1893	Prot. Cruiser				
Eclipse	9	1897	Prot. Cruiser				
*Broke	(x2) 4	1914	Destroyer Leader				
Swift	1	1907	Destroyer Leader				
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Hanover Air Show

LANGENHAGEN AIRPORT, north of Hanover, was again the venue for West Germany's counterpart of Paris or Farnborough, the Hanover Air Show, now under its official title as the Internationale Luftfahrt-Ausstellung '78 and staged between April 26 and May 4. This is the smallest of the three major European trade shows and, whilst the majority of the exhibits were in the general aviation category, there were a number of interesting items to be seen. A notable absentee, however, was the General Dynamics F-16 fighter, a major project that is to be produced in large numbers in Europe for four NATO Air Forces, and indeed there was little reference to this programme on the various stands around the exhibition halls.

US military machines were represented however by a most interesting F-15A Eagle from the Bitburg-based 36th TFW, being the aircraft used by the Wing's CO. Appropriately serialised 76-036, this F-15 bore three horizontal coloured bands on the outer fin tips of red (top), blue and yellow, represent-

Top of page F-15A-15-MC Eagle AF76-036/BT of the 36th TFW, Bitburg. Standard blue/grey overall. Fin tip bands are red (top), blue and yellow (the yellow is not visible). 36th TFW badge on intake, below wing root. **Below left** Ground crew details in black, as is name forward of cockpit. **Below right** Port side nose detail, also of 76-036, showing aircraft's and pilot's names. **Right** The unique RFB Fantrainer, camouflaged in dark grey and dark olive green with light grey undersides.



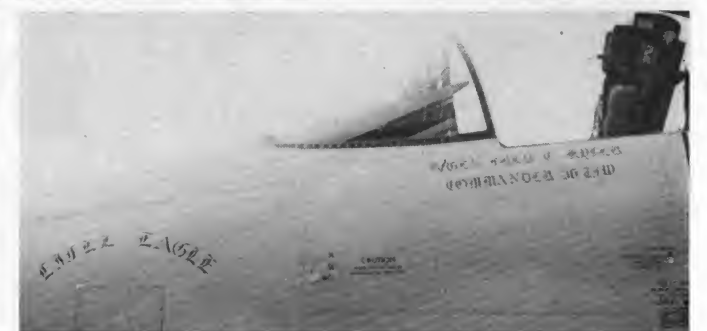
Air, land and sea

compiled by the editor

ing the squadrons within the Wing. The name 'Eifel Eagle' was carried on each side of the nose, while below the cockpit were details of crews; these nose markings were in black in old-style characters. Also a C-5 Galaxy and a C-141 Starlifter dominated the Show area.

Another large exhibit was an A-300 Airbus in the livery of Indian Airlines. This type is now gaining some worthwhile orders, with 72 definite contracts and 29 options so far. A major breakthrough into the vast North American airliner market has been the recent order from Eastern Airlines for 23 Airbuses, with many more on option.

Of course, the most important type on display was the multi-national Panavia Tornado, with two aircraft on display, and much reference to this project on many exhibitors' stands. The same two Tornados that were at Hanover in 1976 were on view, with prototype 07, serial 98+06, performing an excellent daily flying display. P04 was on display in the static park, surrounded by a vast array of weapons, and painted in the colours of the West German Navy, with dark grey upper surfaces and white undersides. Serialised 98+05, it bore the badge of MFG-1 on the port side of the fin, and MFG-2 on the starboard side, these





Above left Nose detail on starboard side of Tornado P 04 98+05 surrounded by various weapon loads. Upper surfaces dark grey, lower surfaces off-white, rescue instructions black and yellow, other markings black and white. **Above right** Tail detail on port side of same aircraft, with badge of MFG-1 on this side and MFG-2 on the other. Underwing pylons black. Legend under flag reads 'Marine Tornado 0004'. **Right** Tornado P 07 98+06 in dark grey/dark olive green camouflage with light grey undersides. Underwing tanks and nose radome black. Bands around nose and fin white and orange dayglo. Note open airbrakes and prop holding canopy open. **Below right** Unusual markings on F-4F Phantom 38+73 of JBG-36 from Rheine-Hopsten, with white panel behind cockpits, white rudder and white outer halves of tailplanes on upper and lower surfaces. **Foot of page** This Polish-built version of the Russian MI-2 helicopter was displayed in the crop-spraying role.

being future operators of this type. Both 04 and 07 are being used for autopilot testing, and the 12 Tornado prototypes have now accumulated more than 1,700 hours of flight test time. Earlier this year the Tornado was evaluated by a team from the Canadian Armed Forces.

One of the few completely new aircraft on view was the RFG Fantrainer, a small low-cost two-seat machine powered by a pair of Wankel rotary engines driving a ducted fan. According to the manufacturers the Fantrainer offers a jet-like performance at low cost, and its development is being funded by the German Defence Ministry, as a possible replacement for the



ageing piston-engined Piaggio P149. Tests have been undertaken at the Luftwaffe flight test centre at Manching. Camouflaged, and serialled 98+30, the Fantrainer performed well at Hanover, coupled with an eerie sound from its ducted propulsion.

A more sophisticated trainer on show was the Franco-German Alpha-Jet, with the first production German aircraft on view, serialled 98+33. The German Air Force will use the Alpha-Jet in the close support role, and deliveries will commence next year. Some 474 aircraft are on order and, in addition to France, West Germany and Belgium, Togoland have ordered five, Ivory Coast 12 and Morocco 24. First deliveries to French training units will also start next year.

Several current machines from the West German armed forces were also on display at Hanover, and items of interest included a German Naval Starfighter of MFG-1 carrying two of the new Kormoran anti-ship missiles under its wings, and an F-4F Phantom of JBG-36 with white areas on the fuselage and tail surfaces. Two Transalls were to be seen, as a reminder that this type is to go back into production for the French Air Force. *Peter F. Guiver*

NZ Freighters depart

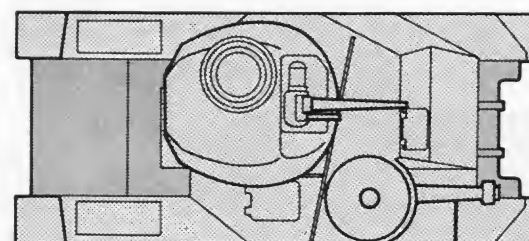
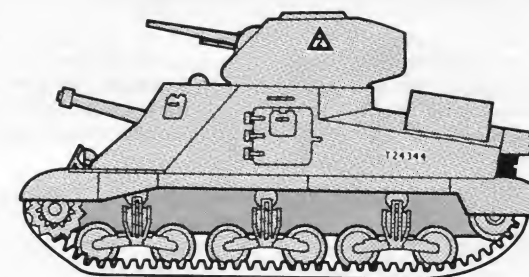
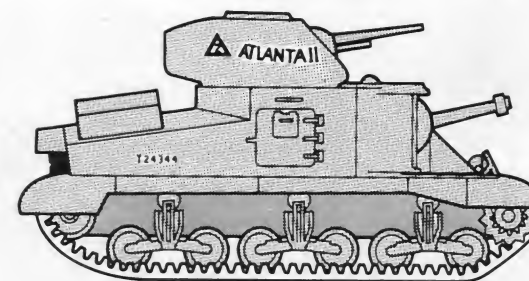
'FORTY THOUSAND rivets flying in formation' — hardly a kind appraisal of the B-170 Bris. Continued on page 590



NEW FROM AIRFIX.



IT STOPPED ROMMEL'S PANZERS IN THEIR TRACKS.



In 1942, the sands of the desert war were fast running out for the British 8th Army.

But then, they received a formidable new weapon. The US-built Grant tank.

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Our kit has over 160 parts, including a commander figure, full assembly and colouring instructions, and 3 decal options.

When assembled, it stands 4½" high, by 7" long.

Technical Details:

Engine: 400hp air-cooled, radial.
Road Speed: 22mph.
Armament: 75mm main gun. 37mm secondary.
Weight: 28 tons.

GRANT TANK 1/32 Scale.





tol Freighter but nevertheless a descriptive term well known to thousands of servicemen who have flown in the aircraft.

The B-170 was never a comfortable aircraft to travel in for any great distance — the narrow, tightly-stretched canvas seats made sure of that! It was noisy too; heaven alone knows what the decibel level was inside the aircraft during take-off. And it was either too hot or too cold — rarely the happy medium. When parked on the ground, its lines could hardly be described as being the epitome of aeronautical elegance.

On the positive side, however, in its day there wasn't a short-haul aircraft built which could compare with the versatility and load-carrying capacity which made the Freighter one of the most successful British aircraft designs of the late 1940s.

The long association between the Bristol Freighters and No 41 Squadron, RNZAF, began back in 1952, when the squadron took delivery of 12 of the then ultra-modern aircraft. In May 1953, the squadron suffered a tragic loss when one of the new aircraft crashed in hilly terrain near Blenheim, New Zealand. The crew was killed.

Two years later, in May 1955, 41 Squadron, equipped with four Freighters, left New Zealand and took up residence at Changi Air Base in Singapore. Who would have guessed then that the squadron would be in Singapore 22 years later — still flying the same aircraft?

The Freighters were flown on active service during the Malayan Emergency, during Confrontation between Malaysia and Indonesia and for ten solid years during the Vietnam War supporting the New Zealand Army's infantry and artillery units, military and civilian medical aid teams and latterly New Zealand Army Training Teams.

A Bristol Freighter was the last allied aircraft to fly out of Saigon's Tan Son Nhut airport on April 26 1975, with the staff of

New Zealand's Embassy on board.

In 1971, the squadron shifted from Changi to Singapore's Tengah Air Force Base and became New Zealand's air contribution to the ANZUK Force. It was at this time that the squadron was equipped with three Iroquois helicopters; this number was later increased to four. Since January 1974 and the disestablishment of ANZUK, the squadron has been an integral part of New Zealand Force South East Asia.

In recent years 41 Squadron Freighters have been flying in support of New Zealand's civil assistance projects and diplomatic posts throughout the South East Asian area. Under the terms of the Five Power Defence Agreement, they flew in support of the Malaysian and Singapore governments.

In all its 22 years in the area, the squadron only lost one other Freighter. In 1956, a B-170 crashed in the rugged country of Malaya's Cameron Highlands. It was during the Malayan Emergency and the aircraft had been on an aerial resupply mission when the crash occurred in poor

weather. Only one man, a member of the air despatch crew, survived — he miraculously only suffered a broken ankle and staggered out of the jungle ten or so days later.

41 Squadron RNZAF was destined never to return to New Zealand. On December 6 1977, it disbanded in Singapore; the next day the remaining three Bristol Freighters took off from Tengah for the last time and headed south to New Zealand and decommissioning.

New Zealand's longest-serving military unit in South East Asia is no more. No doubt many hundreds of Air Force men, both in and out of the Service who have served with 41 Squadron, will look back on their time spent in Asia with nostalgia and maybe not a little wistfully. With the departure of the Freighters, an important era in RNZAF history draws to a close. The throaty roar of Bristol Hercules engines, the smell of oil and all the 'discomforts' of Freighter flying are now but a memory. New Zealand's 40,000 riveted ambassadors have gone.

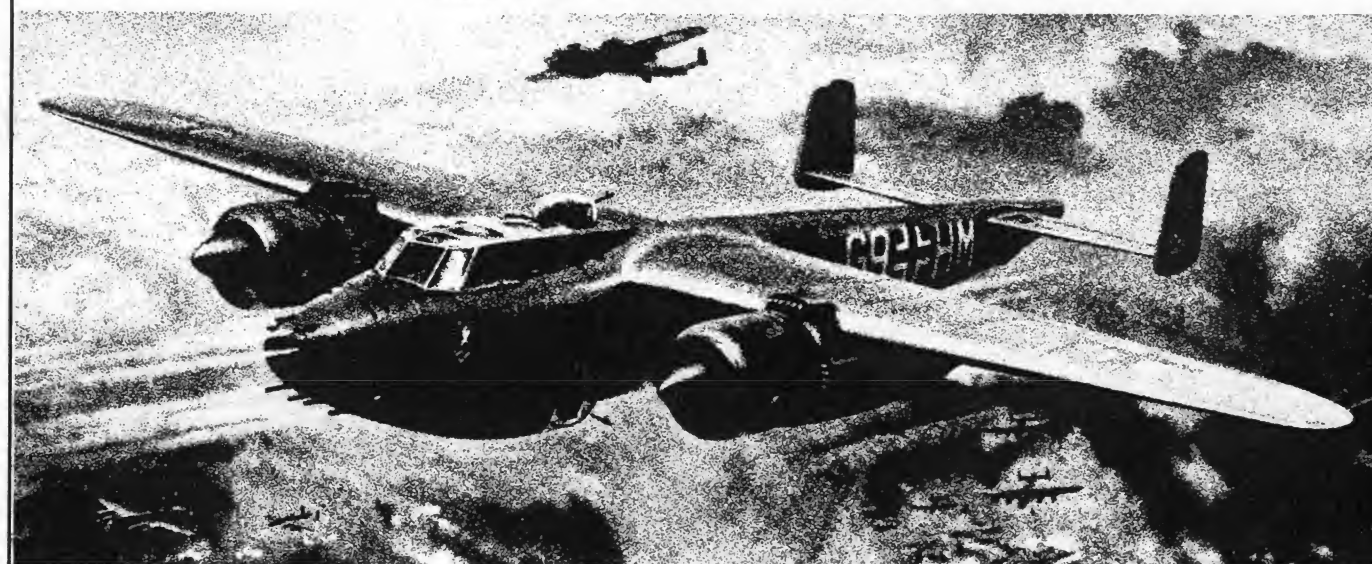
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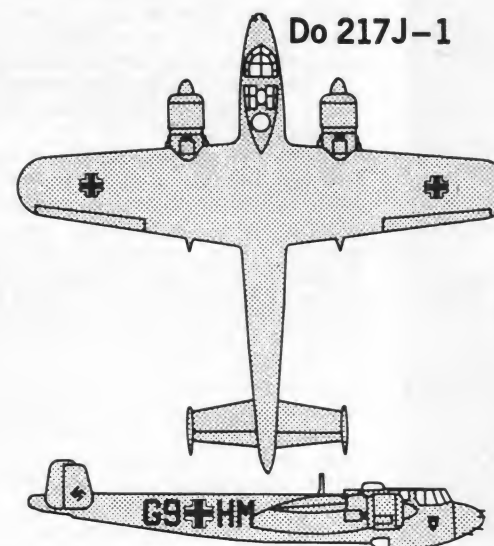
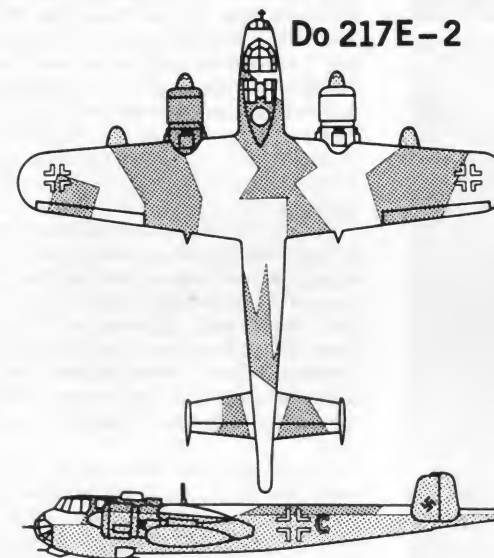
Three views of Bristol Freighter NZ5912 at Tengah. Camouflage is a faded dark green and a pale earth/stone shade with off-white under surfaces. 'Royal New Zealand Air Force' on the nose is white, serial black. Rescue arrows black and yellow. Propeller blades pale grey with black leading edges and white/red/white tip bands. The 41 Squadron badge is a white disc with two red concentric circles and red lettering '41 SQN' with a black map of New Zealand in the centre. Note lack of 'Kiwi' roundels on wing upper surfaces.



NEW FROM AIRFIX



Picked its British targets from a tourist guide!



From the British point of view, the Dornier Do 217 is probably best remembered for the role it played during the famous 'Baedeker' raids of 1942. Selected by the Germans from their famous 'Baedeker' Tourists Guide Book, Bath, Norwich, York, Exeter, Hull and Poole were among the historic cities attacked by night and, in some cases, severely damaged.

The Airfix kit faithfully reproduces the night bomber Do 217E with its transparent nose, 2 forward-facing guns, standard protective armament and an appropriate set of Luftwaffe markings.

The kit also includes a variant — the Do 217J. A night fighter with a solid nose, machine guns and cannon, with its own colour scheme and set of transfers.

Technical Details:

Engine:	Two B.M.W. 801 ML Radial
Speed:	273 m.p.h. maximum
Service Ceiling:	24,600 ft.
Armament:	One 15 mm MG 151 Cannon One 13 mm Machine Gun Three 7.9 mm Machine Guns

DORNIER Do 217
1/72 Scale



Michael J. F. Bowyer

Army-air colours 1937-45

Part 34 — The last rounds

DURING THE 1939-45 war use of Auster AOPs in the Far East was limited to 656 Squadron, formed at Westering on December 31 1942, and based at Stapleford after May 1943. The squadron sailed from Britain on August 14 1943 and arrived at Bombay in September where their Auster IIIs were assembled in October and November. A further consignment arrived at Calcutta in December, but there was a spares problem and some Austers were damaged in transit.

Conditions in the Far East were far from ideal for the AOPs. By the summer of 1944 the story was of fabric and wing spars rotting, woodwork giving problems and Perspex needing replacement. Indeed, fabric wore so badly that it had to be replaced after four months.

Great distances existed between the

squadron HQ and their operational Flights, and the maintenance base was far off too, at Calcutta. No 656 Squadron was the only AOP squadron to operate in Burma, for which two courses for Royal Artillery officers training them as pilots had to be run. Other pilots arrived from Britain by way of reinforcement, for whom a refresher course was held at Deolali near Bombay.

It was from there that 656 Squadron left for the front on January 12 1944, travelling by road to Calcutta where they arrived on January 22 1944. From this point the aircraft moved forward to the Arakan Front. There 656 Squadron began operations on January 28 in the centre sector of the fighting. A move was made by 'C' Flight, who operated on the Kohima front. 'B' Flight had been left behind at Deolali and on February 16 received orders to join 4 Corps at Imphal

before returning once more to Calcutta in March. Then they moved into Tamu and left on March 21 for Moreh three miles away. Two Austers were lost in a crash and replacements arrived in two Dakotas.

An intensive period of operations then followed for 656 Squadron during the spring and summer, but during the monsoon period in autumn the squadron refitted at Ranchi, then HQ, 'A' and 'B' Flights returned to the Imphal area, 'C' Flight having joined 33 Corps in September 1944. 'B' Flight fought in the jungle war with 19th Division to December 1944, then joined 4 Corps for its epic march.

'C' Flight arrived on the Arakan in September 1944 to operate with the 15th Division at Cox's Bazaar, and was then using seven Mk IIIs which remained squadron equipment during the year. In October 1944 they operated from Maungdaw with the 25th and 26th Indian Divisions. 'B' Flight went into action again in February 1945 and next month they were with the 17th Division for the capture of Meiktila. The next month they accompanied 33 Corps in their advance on Rangoon. Meanwhile, HQ Flight busied themselves taking photographs, supplying spares and did some cable laying.

On May 12 1945 all of 656 Squadron were united at Rangoon and left early in June for India. It was intended that they should go to Malaya to assist the invasion there, but in the event they proceeded instead to Indonesia. Although the squadron disbanded in 1946, apart from 1914 Flight, the squadron took its place in the line again when they reformed at Sembawang in July 1948.

During the war 656 Squadron mainly used the Mk III, eg, NX520, although they had formed with Mk I's, eg, LB370. Some use was later made of the Mk IV, eg, MT239, Mk V NJ739 and Mk VI, eg, VX117. The rarest of the Auster variants in the Far East was the Mk IV of which very few served, including MT159, MT238 and MT239. Backing 656 Squadron was 1587 AOP Refresher Flight at Deolali, its aircraft including NJ739 and NJ741.

Trials of a floatplane version of the Mk V had been conducted in 1945. The first of these was TJ207. This was followed by two others, TW521 and TW522, which were exported from Liverpool in July 1946 to Singapore. The idea had been to use the floatplane operationally, but there was no real niche for this, and certainly not after

the war. Both machines were scrapped in May 1948.

The Auster AOP VI prototype, TJ707, first flew on May 1 1945 and production deliveries commenced in September 1946. Its power plant was the Gipsy Major, but the most obvious change came with the addition of wing trailing edge aerofoil flaps in place of split flaps. Empty it weighed 1,413 lb, loaded 2,160 lb. The top speed was about 124 mph at 1,000 feet, and it could cruise at about 105 mph, the service ceiling being 14,000 feet. Wing span was 36 feet, fuselage length 23 feet 9 inches. TJ707 was delivered to Boscombe Down for acceptance trials on December 7 1945 and finally left the establishment on December 12 1946 when it went into storage at 20 MU before being sold to Air Service Training on February 14 1949. The last Mk VI was delivered on March 26 1953.

Early production Mk VIs were finished silver overall, partly to suit them better to Far East service, but a reversion came about 1950 to the Dark Green/Dark Earth overall scheme with white serial numbers. Early Mk VIs had Type CI fuselage roundels, Type C underwing roundels and Type B roundels above the wings. Some Mk Vs acquired a similar scheme and both types were seen with Type D roundels. Such identity letters as were carried were black, and some post-war Austers had coloured spinners to identify Flights.

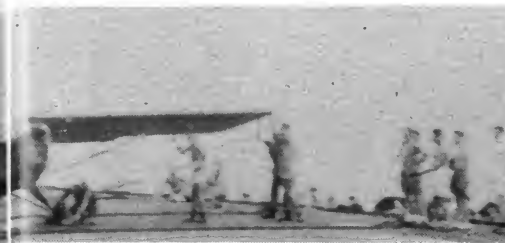
After reforming, 656 Squadron was based in Malaya where the Austers were intensively used during the emergency there. Others served in Germany, the Middle East and in Britain, the Mk VI replacing the Mk V in the late 1940s.

In Britain five squadrons of the Royal Auxiliary Air Force were equipped with Auster Vs and VIs. No 663 Squadron applied light blue rectangles to either side of the fuselage roundels of some of its Mk VIs and added a red 'zig-zag' as on VF623 'M'. A T7, WE571, was silver overall with yellow 'training bands' and bore this marking and the letter 'O'. The prototype of the dual-control T7, VF665, first flew in 1947.

Principal post-war user of the Auster in Britain was 43 OTU which was redesignated 227 Operational Conversion Unit in 1949 and later became known as the Light

Top right A number of Auster 6s set aside for operations in the Suez campaign were painted overall in a two-tone brown scheme with black serials like WJ270, and Type D roundels. **Above right** Photographed in 1960 soon after the formation of the Army Air Corps, this Auster 6 carries the legend 'ARMY' in white ahead of VF544. The divisional sign is forward of the door. **Centre right** The next stage on — black serials and inscription. **Lower right** A silver/yellow banded Auster T7, WE607, of the Light Aircraft School. **Bottom right** Auster AOP 9 XP278 with white serials.

Top of page An Auster III of 656 Squadron aboard an aircraft carrier in the Far East. **Top left** The prototype Auster V floatplane, TJ207. **Centre left** Auster V TW458 in 1947-style markings, silver overall with Type D roundels. **Left** A 1956 shot of Auster AOP 6 VF526 in overall Dark Green-Dark Earth finish.





Top left AOP 9 XK421 features additional orange dayglo panels to render the aircraft easily visible to trainee pilots. Top right The first stage in Beaver markings – overall Dark Green-Dark Earth with white serials. Photographed September, 1968. Above left XP805 photographed a year later can be seen to have a roundel much reduced in size, and with a small white band. Above right Chipmunk WG323 in Army hands, with orange dayglo band and cowling on silver finish.

Aircraft School. Prior to becoming the LAS the unit retained its late war unit identity as on BD-E:TW505 and PF-U:VF621 and silver Mk 7s BD-D:WE548 and PF-C:WE547, all in use in 1953. This unit by any name remained at Middle Wallop which was to become the Army Air Corps Centre when the Corps formed in 1959.

Before that happened operational Austers regained some of their camouflage, the white serials being replaced by black, although after formation of the Corps (when ARMY was applied ahead of the fuselage serials) both items were white on some aircraft. Such individual identity then carried was at first white, later black, like underwing serials.

In 1945 a new specification had been issued for an army co-operation aircraft with STOL characteristics. Heston produced their twin-boom design to A.2/45, Auster opted for a high wing aircraft, the prototype of which, in silver finish, VL522, was tested at 227 OCU in 1950. The winner, though, was the SAL Pioneer which, although a liaison aircraft, was far removed from being an AOP.

The AOP 6 reigned supreme until 1954 when the final AOP variant appeared, the Mk 9. This was the first of the line designed from the outset as an air observation post. Its engine was more powerful than previ-

ously, and the wing was larger. A two/three-seater of metal construction with fabric covering, it had a wing span of 36 feet 5 inches, length of 23 feet 8½ inches. The empty weight was 1,416 lb, loaded 2,130 lb.

The AOP 9 was, apart from an AOP aircraft, suitable for photo reconnaissance and casualty evacuation. Its power plant was the Blackburn Cirrus Bombardier 203 giving an output of 180 hp, which gave it a top speed of 127 mph and a cruising speed of 110 mph. The prototype, WZ662, first flew on March 19 1954 and the third prototype, one of the development batch of four, appeared at the 1954 SBAC Show. Without doubt one of the ugliest British military aircraft for many a year, the first production aircraft, WZ668, was delivered on February 11 1955.

No 656 Squadron in the Far East equipped soon after with AOP 9s. Early aircraft in Dark Green/Dark Earth finish had white serials, which were later changed to black. Auster AOP 9 production ended in September 1958, and a few remain in Army hands. Some were to be seen at last summer's Army Air Corps open day.

It is not the intention to continue Army-Air Colours beyond the end of the war, this being the final instalment of our long-running feature. Accompanying photo-

graphs, however, depict the trend since the 1950s.

The dominant feature of those years was, of course, the formation of the Army Air Corps in 1959, which took the AOPs away from the RAF. As regards equipment, though, it must be the gradual switch from fixed-wing aircraft to helicopters that has been all-important. At the end of the war the RAF held some Sikorsky Hoverflies with which some liaison work was undertaken, but helicopters were not mechanically reliable enough until after the Korean War, in which Auster 6s served with 1903 Flight, and the Malayan troubles. But in the latter part of the 1950s the Skeeter became available for army support duty, although it was far from satisfactory. Fixed-wing aircraft were looked upon still as more dependable, although the tactical advantages of the helicopter were plain for all to see.

The Army Air Corps made its home at Middle Wallop where the training base is still sited. Here the Corps based its Chipmunk T10s, silver with dayglo trim. 'ARMY', and serials like individual letters were black. These aircraft are still used for initial training. Any follow-up of active service with fixed-wing aircraft has, since 1961, been on Beavers. The Army acquired an ini-

Continued on page 596

Below right Skeeter XL736:D in Dark Earth-Dark Green overall finish with red-white-black tail rotor blades. Below left Sioux XT193 of the Blue Angels formation team in 1975.



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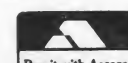
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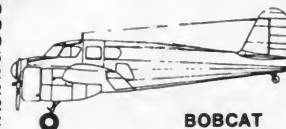
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Top Scout XP896 in Dark Earth-Dark Green finish with white trim, photographed at Middle Wallop in April 1967. **Centre** Gazelle XW847 in Dark Green-Black overall finish flies over a similarly coloured Scout in September 1975. **Bottom** Trials of the Wallis autogiro were held, but the aircraft was rejected by the Army. Dark Green XR942 is seen here during the trials period at Middle Wallop. **Foot of page A** suitable tailpiece – the old and the new. Bristol Fighter D8096 taxis past a Scout XT632, the latter in the green-black finish, and carrying Nord missiles.

painted matt black, and the aircraft camouflage also became matt once more, the Scouts having been produced in a glossy finish. Then, over a rather protracted period, as aircraft received major overhauls, matt black replaced the Dark Earth in the overall camouflage. Such is the basic finish of the Beavers, Scouts and Gazelles now used, and these all carry very small diameter Type B blue/red roundels, on the wing under surfaces too in the case of the Beavers. Some training helicopters retain the previous camouflage colours, and wear dayglo panels too.

The organisation of the Air Corps has undergone a number of changes, basically the squadrons being broken up into independent Flights which more recently have again been formed into squadrons. Some have made use of French-built Alouette helicopters, and again a few remain in active service.

Fast Gazelles are a far cry from the army support aircraft of World War 1, details of which were carried in the first part of this long series. The duties performed are not all that different, but the latest aircraft have considerable flexibility. Like the other Services the Army Air Corps has suffered serious cuts in its strength which cannot but be declared worrying and highly disputable.

The demands upon Army aviation have certainly been great in the post-war world, and it has played an important part in the policing of Northern Ireland where helicopters have been invaluable. The Army had to fight hard for its Air Corps, an enterprising organisation with its roots in the very start of military aviation, and whose 'Blue Beret' dates back from the Glider Pilot Regiment days.

In closing this is surely an apt point at which to thank readers for the interest they have shown, and in particular to thank all who have made helpful comment. □

tial 36 from de Havilland (Canada) these being shipped to Britain and assembled at Chester, and carried the serials XP767-780 and XP804-827. A few remain in service for supply dropping. Their role has mainly been as light transports here and in Germany. These are the largest aircraft the Corps has used because of the weight restriction placed upon the size of aircraft they may operate.

In the mid-1960s the Westland Scout came into prominence and remains in service. This type was not strictly a replacement for any other, but served in a varied role including casualty evacuation and as a gunship. It can also carry rocket weapons.

The Skeeter was, roughly speaking, replaced by 150 Bell 47G3 Sioux AH1s, 50 of them Italian-built and the remainder coming from Yeovil. A few remain in service as light liaison aircraft, the original intention of attaching them to army formations to perform rather as airborne cavalry being overtaken by events. They will probably best be remembered for their fine displays in the hands of the well known 'Blue Eagles' formation team now, unhappily, disbanded. A handful of civilian-operated Siouxes now are used to give basic helicop-

ter training at Middle Wallop.

Since the early 1970s the accent has been more and more upon camouflaging the operational Army aircraft. Initially their roundels were greatly reduced in size, an outer diameter of six inches being the size for many fuselage roundels, in which the white band was made extremely narrow. All identity letters and numbers were then



2 PDR QF MK VIII



The Quick Firing 2 pdr Mark VIII High Velocity gun on single Mark VIII mounting described by **John Lambert**

WITH THE GATHERING war clouds over Europe in the 1930s, the British government made plans to re-arm and re-equip the services. Being an island nation the protection of the sea lanes was vital and long term plans were made to improve the standard of the Royal Navy which had been, technically, one of the most efficient in the world.

Between the two wars, much of the

emergency World War I construction that became the 'Racecourse' and 'Hunt' class sloops were scrapped or sold abroad, and from the late 1920s new warships of the 'Bridgewater', 'Hastings', 'Shoreham' and 'Falmouth' Classes were constructed. These peacetime vessels were very well finished and had workmanship of the highest standards. They were capable of serving anywhere in the world, and although

they did not have the firepower of a cruiser, they were able to perform a similar duty for a much smaller capital outlay. These new ships, built between 1927 through to 1933, were gradually joined by the very efficient Fleet minesweepers of the 'Halcyon' Class, and the escort sloops of the 'Bittern', 'Egret' and 'Black Swan' Classes.

The new ships took about two years to build and were to form the nucleus of a very effective fleet. However, they could not be mass-produced on a large scale because of their very complexity, and in 1938 it was realised that there was still a

Top of page The Mk VIII mounting aboard the 'Bangor' Class minesweeper HMS Beamaris in 1942. Duffle coats and sea boots are much in evidence (IWM). **Right** HMS Watchman fitted with a 2 pdr 'bow chaser' for use against enemy 'E' Boats (IWM).





Above The gun aboard the corvette HMS Pentstemon. (IWM). Left The other side of the mounting seen aboard the Canadian corvette HMCS Eyebright in the North Atlantic (D. K. Blakeley).

Mountings

During and after World War 1 the 2 pdr gun was used in a number of mountings, each having a different mark number, and here I must confess to some confusion. The 'S' Class destroyers of the 1917-18 programme had a 2 pdr pom pom on a HA II mounting, and the 'V' and 'W' Class destroyers carried the same single gun. But the new special destroyers carried two 2 pdr pom poms in the 1924-25 programme, aboard *Amazon* and *Ambuscade*, as did the later destroyers.

The 'Tribal' Class destroyers of the 1935-36 programme were further users of the 2 pdr pom pom. A number of different mountings were considered for carrying either four twin, or a four-barrelled multiple pom pom, or for even replacing one of the after twin 4.7-inch guns with an eight-barrelled Mk 'M' pom pom mounting that was designed to be fitted aboard battle-ships and cruisers. In the event the 'Tribals' and later, the 'J', 'K' and 'L' Classes, carried a four-barrelled Mk II gun in a Mk VIII* or Mk III mounting with quadruple .5-inch machine-guns fitted in the bridge wings. This continued in the succeeding destroyer classes, where the quad pom pom mounting was fitted when available, and the quad .5-inch was gradually replaced by the 20 mm Oerlikon.

For the new ships beginning to roll off the slipways in the 1940s the new single Mk VIII mounting was laid down as the secondary AA armament and guns and mountings were pressed into mass production. Some 'Flower' and 'Bangor' Class ships had to wait for their designed armament and were sent to sea with whatever else was available. Both classes carried the quad .5-inch machine-gun mounting in some ships, and early corvettes awaiting their 2 pdr had up to four .303-inch Lewis guns, with small shields, on their after gun deck. As production got under way, supply improved and large numbers of these high rate of fire mountings were fitted.

The new single Mk VIII mounting was arranged to accommodate the 2 pdr Mk VIII LV, or the Mk VIII* HV gun in a cradle. The mounting was unpowered, the gun layer on the left and the trainer on the right operating their handwheels, both standing on platforms fixed to the mounting. A simple fixed splinter shield was fitted to the front and the whole mounting swung or trained together. The gun elevated through a gap in the shield to 70 degrees and down to -10 degrees. The fixed sights moved up and down with the gun. The weight of the mounting without the gun and shield was 1 ton 3 cwt 12 lb, the shield weighing 5½ cwt.

The mounting was fitted to a great number of ships engaged in the coastal areas around British shores. It was particularly useful as a 'bow chaser' when fighting enemy E-boats and was fitted to the long range escort HMS *Watchman*, a 'W' Class destroyer built in 1917. The ship was much modified to give her a longer range by having her forward boiler room and funnel removed. She had much additional radar equipment (271 search TBS and Huff Duff) and her 'A' 4-inch gun replaced by a Hedgehog A/S weapon, 'B' and 'X' guns retained, single 20 mm Oerlikons on the bridge wings and old single 2 pdrs on her bandstand amidships. □

great shortage of escort vessels, Fleet minesweepers and destroyers. Plans were made to produce a more basic design, capable of mass production, which could be crewed by vast numbers of 'hostilities only' and reservist ratings that would be required in time of war. New ideas were discussed and standard machinery specified, and from these Admiralty meetings came the 'Flower' Class corvette with single reciprocating engines to add to the coastal escorts of the 'Kingfisher' Class twin-screw corvettes, eight of which were built between 1935 and 1939.

Fleet minesweepers of the 'Bangor' Class were also ordered with twin screws and either diesel, reciprocating or turbine engines. These basic designs were ordered in both British and Canadian yards. The Australian Navy ordered a similar type known as the 'Bathurst' Class with a small number of later ships built in Australia for the Royal Indian Navy. The third emergency type were the small 'Hunt' Class escort destroyers. Orders for each type were given and building in large numbers commenced.

With such a large construction programme underway it seemed the first ships would not reach the fleet until late 1940. Obviously the simpler the ship the sooner it was built and the first types to arrive were the 'Flower' Class corvettes, followed by increasing numbers of 'Bangor' Class ships from 1941 onwards.

The 'Flower' Class had a standard Mk IX 4-inch gun of World War 1 vintage which had remained in store from the 'Abadare' Classes of the previous war. In late 1939 it was decided to equip them with a single 2 pdr pom pom aft, and these were

authorised from that date.

The new mounting, the Mk VIII, was designed to carry an up-dated pom pom that had been modified between the wars, and was the best close-range anti-aircraft gun type then available. The gun dated from the early 1930s and both four- and eight-barrelled versions slowly found their way into the fleet.

The pom pom gun

The Mk VIII gun was fully automatic with a 1.575-inch bore (40 mm, equal to 1.5748 inches), had a rate of fire of 115 rpm and a muzzle velocity of 2,400 feet/sec. It was fed from a box with ammunition in articulated links and became the standard heavy close range weapon for warships from destroyer size upwards.

By 1943 it had been developed as the 2 pdr Quick-firing Mk II* C with a lower muzzle velocity of 2,000 feet/sec but with an increased rate of fire of 200 rpm. The overall length of the gun was 8 feet 4.6 inches; length of barrel 5 feet 2 inches and the average length of recoil 7½ inches. The shells were available as tracer and HE (High Explosive). The weight of a complete HE round was 2 lb 3 oz and one complete round with articulated link 3 lb 5 oz; the weight of a loaded box being 140 lb. The ammunition was supplied in links of 14 rounds, weighing 42 lb, which were clipped to the previous belt in the loading tray on the right-hand side of the gun. The three loaded belts clipped together supplied 42 mixed tracer and high explosive shells to ranges of about 1,400 yards. Such a weapon could give a good account of itself against aircraft or surface ships, and in particular against enemy E-boats and surfaced submarines.



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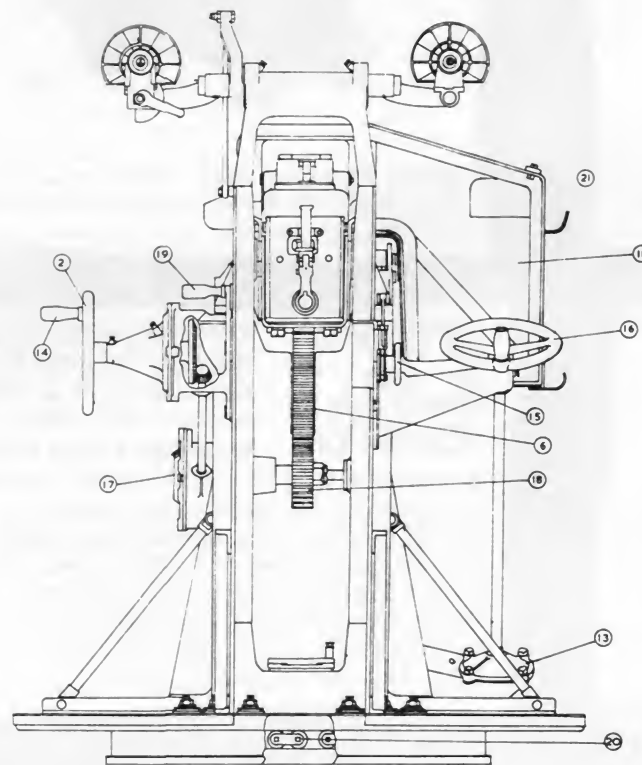
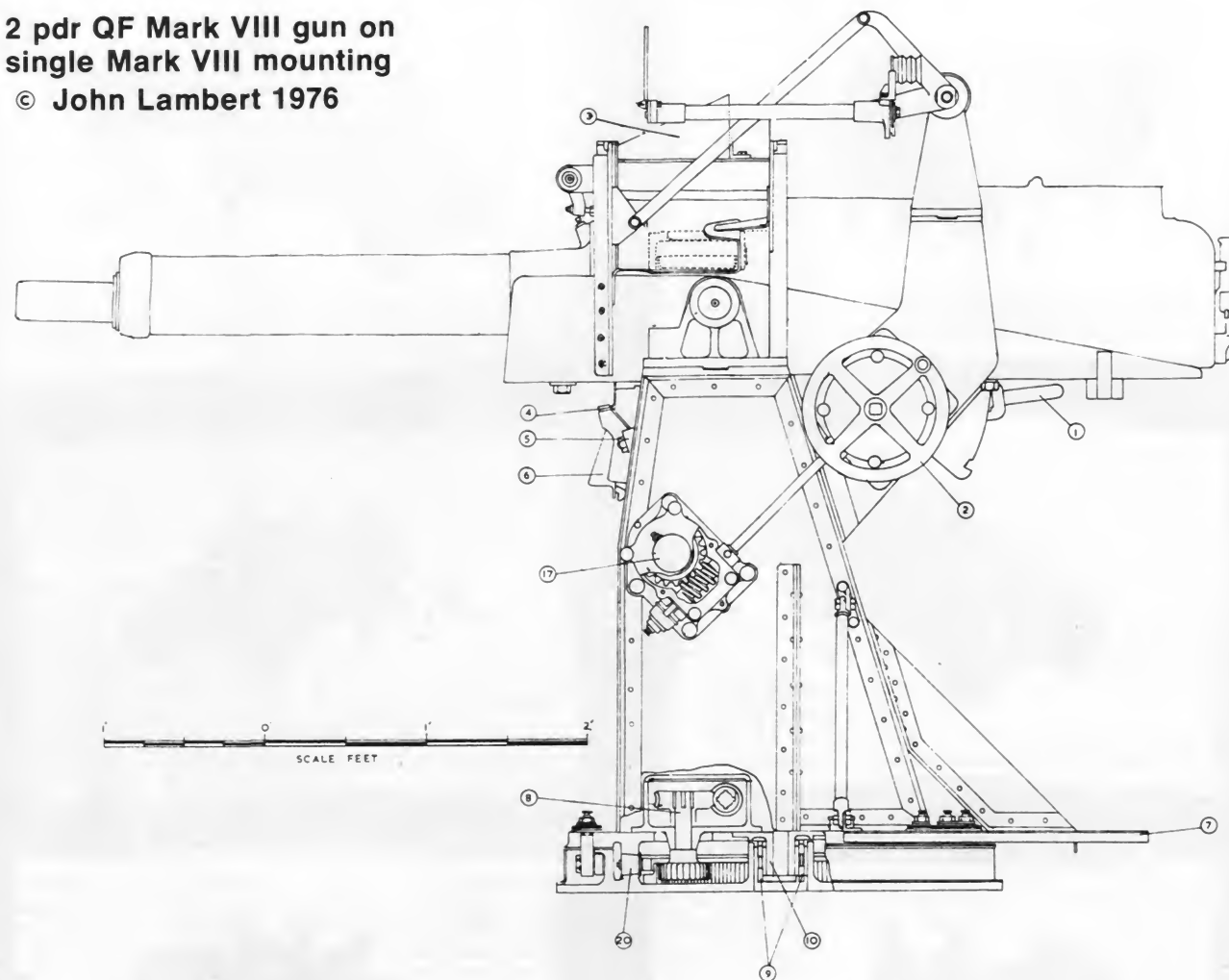


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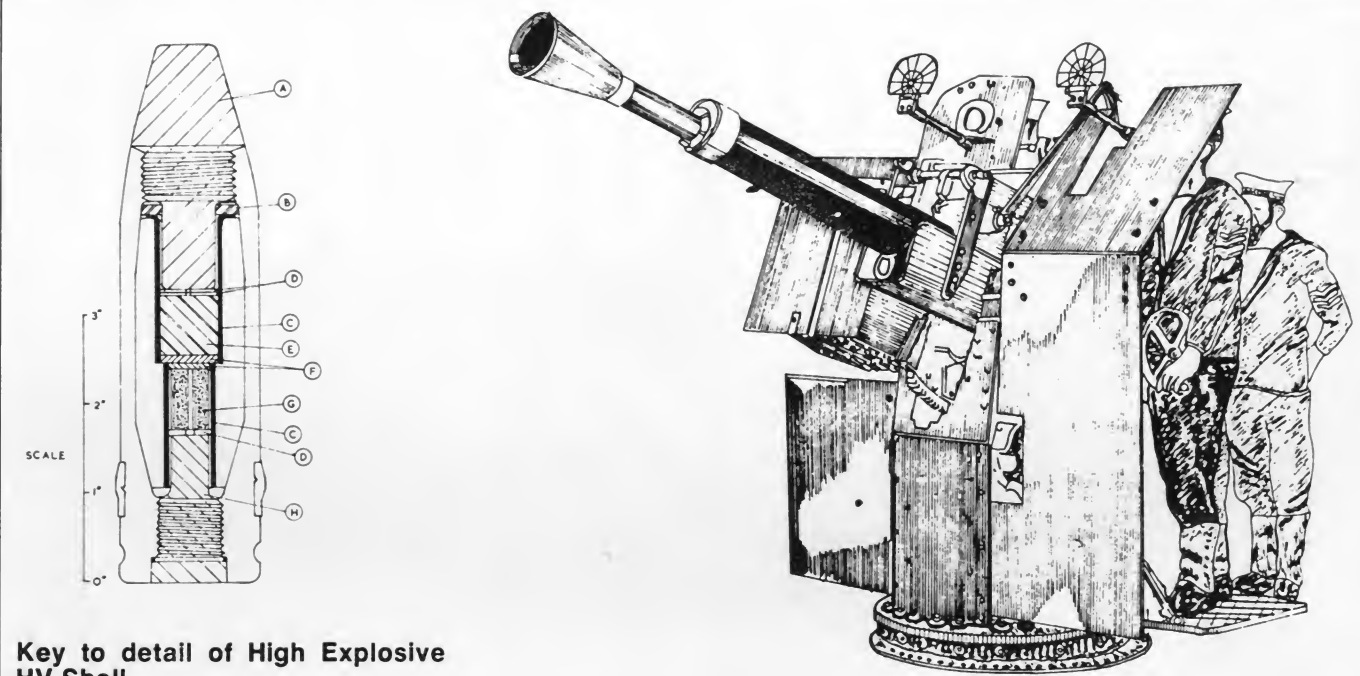
RICHARD KOHNSTAM LTD., 13-15a HIGH STREET, HEMEL HEMPSTEAD, HERTS.

2 pdr QF Mark VIII gun on
single Mark VIII mounting
© John Lambert 1976



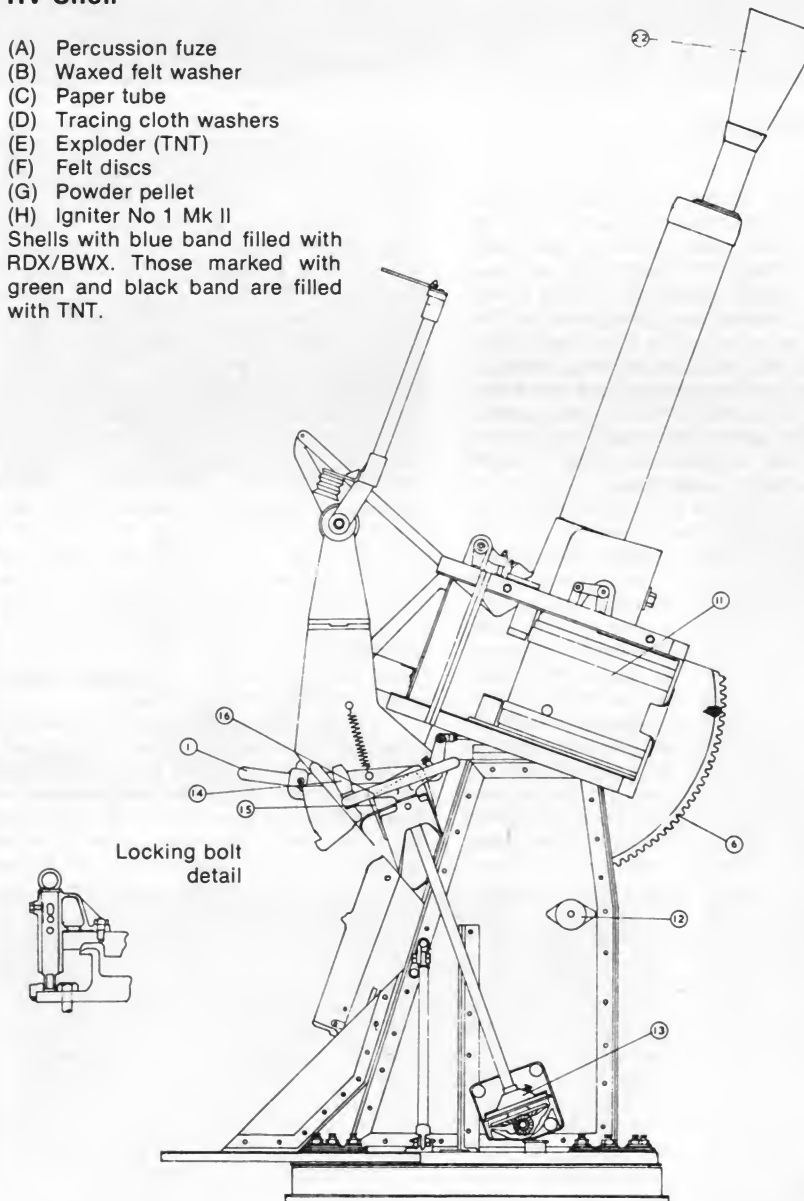
Mounting and gun detail

Muzzle velocity — 2,400 fps. Length of barrel — 62 inches. Diameter of bore — 1.575 inches. Length of rifling — 54.84 inches. Twist of rifling — 1 in 30 (right-handed). Number of grooves — 12. Length of recoil — 7.5 inches (average). Overall length of gun — 8 feet 4.6 inches. Capacity of water jacket — 22 pints. Rate of fire — 115 rpm. Weight of mounting minus gun or shield — 1 ton 3 cwt 12 lb. Weight of shield — 5.5 cwt. Maximum elevation — 70 degrees. Maximum depression — 10 degrees. Working radius — 6 feet.



Key to detail of High Explosive HV Shell

- (A) Percussion fuze
 - (B) Waxed felt washer
 - (C) Paper tube
 - (D) Tracing cloth washers
 - (E) Exploder (TNT)
 - (F) Felt discs
 - (G) Powder pellet
 - (H) Igniter No 1 Mk II
- Shells with blue band filled with RDX/BWX. Those marked with green and black band are filled with TNT.



Key to detail of mounting

- (1) Firing handle
- (2) Elevating handwheel
- (3) Balance weight
- (4) Depression stop
- (5) Elevating stop
- (6) Elevating arc
- (7) Upper racer plate
- (8) Training pinion
- (9) Vertical rollers
- (10) Central pivot
- (11) Ammunition box
- (12) Access plate to bearing of elevating shaft
- (13) Training gear box
- (14) Handwheel
- (15) Loop grip
- (16) Training handwheel
- (17) Elevating gear box
- (18) Elevating pinion
- (19) Fixed grip
- (20) Racer rollers
- (21) Clearance aperture for tool connecting belt end link Mk II
- (22) Flame guard

CAMOFOLIAGE



Creating realistic foliage effects for dioramas or wargames by Stef Zadziuk

IT IS COMMON knowledge to military modelers of the 1939-1945 period, particularly to those specialising in German armour and equipment, that the most noticeable feature of the German camouflage system of the latter war years was their abundant use of local foliage to help conceal material from roving Allied close support aircraft, especially on the Western and Italian fronts and to a lesser extent on the Eastern front. The latter section of that excellent book *Panzer Colours*, by Culver/Murphy shows some fine examples of foliage effects and camouflage. If you have this book, keep it handy as a reference for later on in this article. Foliage was also used to break up the outline of vehicles and equipment in areas devoid of cover such as the Steppes of Russia.

By the end of the war the Germans were experts in the field of camouflage, their three-colour scheme being adopted with slight modification by NATO forces. On an opposite parallel, one sees at the various shows and exhibitions, beautifully made and painted models depicting German equipment of the 1939-1945 era but 99 per cent of these suffer from a suspiciously regular lack of foliage which was so predominant during this period. Either that or the models are displayed in a diorama festooned with wonderfully lurid grass, trees and vivid orchards, which surely completely destroys the effect which the modeller was striving for, namely realism.

As a modeller and wargamer of German equipment of the 1944-1945 period, my thoughts have frequently turned to this problem. Note the emphasis, modeller first and wargamer second. This presents problems as I am never happy with a 'one-off' of a particular vehicle for my units, which can prove time-consuming and expensive. However, that is my problem. Turning back

to the foliage matter, I remembered an article in a railway hobby magazine of the late 1960s (!). After some hunting I eventually found it. It described tree making by using dried tea leaves carefully stuck one by one on to an armature of twisted wire. The painting was even more mind bending in that each leaf was painted individually a light green on the undersurface and a dark green on the uppersurface. It's true, go out and look at leaves on a tree. The finished product was the nearest thing to a live miniature tree I've ever seen.

Although perhaps fine for dioramas, this was definitely not the answer to my problem, where I needed a number of branches for several pieces of equipment. Quite accidentally I hit on the solution and it's very simple. I do not claim to have invented this system as I am sure railway modellers, who are noted for their realism in scenery making, use it one way or another, but I have never seen this method in print. It consists of painting the outer 'branches' of pieces of lichen with adhesive 'C' or PVA. Whilst the glue is still wet, dip the piece of lichen into a bowl of green flock. The green flock can be varied in shade, but the darker greens give a better finish. Vary the green shades from tree to tree, as this gives a better effect.

The shades of green made by different manufacturers vary enormously. Among the best are SLS Scenic Products and Railroad Scenic Exhibition of Bradford. At the other end of the scale Riko produce green flock which is completely unrealistic. SLS Scenic Products of 2b Fox Street, Liverpool 3, also produce some very fine trees, in fact those illustrated in the diorama are by SLS, and are, you'll agree the most realistic on the market today. They are all reasonably priced around 35p and 45p, well made in different sizes and types, ie,

poplars, pines and deciduous, which would all be suitable for scales from 1:76 to 1:35. Some ingeniously made trees are also available for 1:300 scale wargamers. SLS also produce hedging in various heights and lengths which looks most realistic as can be seen in the diorama. Although generally more readily available in the north of England, they could become easier to get in the south if you pester your model shops.

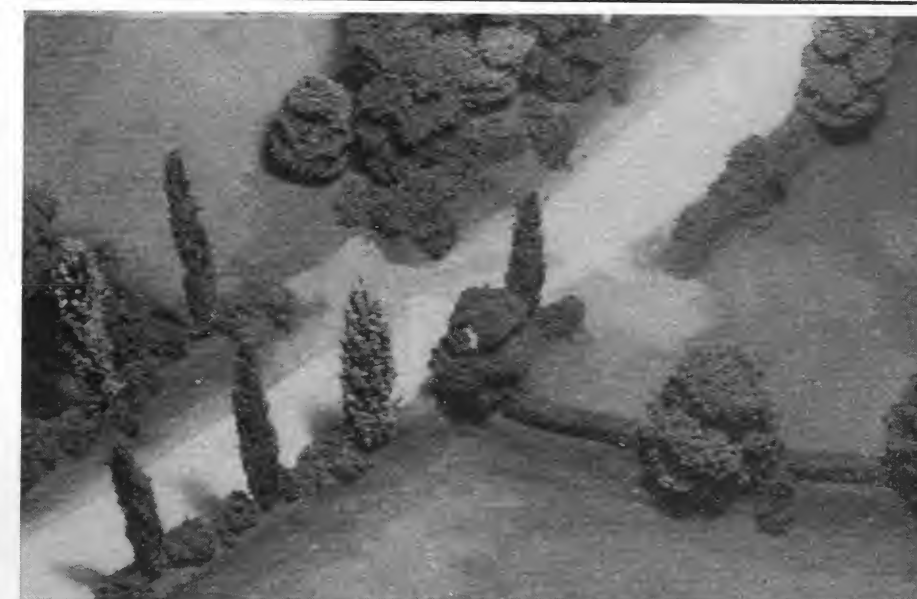
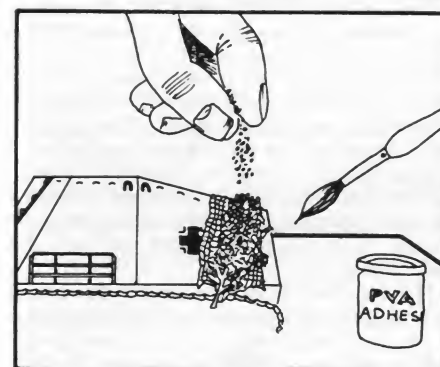
However, the system I am describing here is for individual branches which one sees strewn about German vehicles, particularly in 1:76 scale but can work equally well in 1:35 scale. Close study of photographs of foliated vehicles will help as to positioning and method. The foliage is applied when the model has been completed, painted and marked. This was fixed to the actual vehicle by lashings or, more frequently, pushed into the netting or wire strands fixed to the vehicle for this purpose. In miniature, gauze bandage material can reproduce this admirably.

To begin, place the 'netting' in a suitable position referring to actual photographs and fix in place using an appropriate adhesive such as UHU, stretching it over the area. When dry, the netting can be painted and the vehicle touched up to hide any smears of cement which may have strayed on to the vehicle surface. I use khaki drab or olive drab for netting.

When this is dry, select small pieces of lichen, so that they resemble branches, ie, with a centre stem and small 'twigs' coming away from the main 'branch', preferably the autumn shade lichen, but the darker greens or browns will do. Alternatively, I use small dried out weeds from the garden, trimmed so as to represent branches. These can become brittle, so be careful when handling. The 'branches' on the front of the Nashorn in the photograph are these dried weeds. The selected pieces of lichen or dried weed are then cemented to the



Above Airfix PzKpfw IV converted to Ausf H with mesh schürzen. Its lack of foliage prevents it from blending in with the surroundings. **Above right** Aerial view of a most realistic country setting made up with SLS trees, etc, treated as described. **Below and heading photo** Eric Clark Hummel converted to fit the Airfix PzKpfw IV chassis.



netting with UHU or similar, being careful not to apply too much cement and avoid stringing. Study actual photographs for positioning.

When you have fixed the lichen to the netting, being careful not to overdo it, unless you want an 88 mm perambulating bush, carefully brush the outer areas of the lichen with PVA glue. Before this dries take a pinch of green flock and sprinkle it over the lichen. Picking up the model tap the base of it lightly to get rid of any excess flock. You can keep retouching with PVA and flock as you go along. Remember to work in small areas to build up the leaf effect. Also try and leave a small part of the lichen stem uncovered, preferably pointing downwards. The exposed stems are then touched up with a natural wood colour to represent the actual branches. Leave the whole to dry.

By varying the coloured flock, you could imply a particular season, using brown flock for autumn instead of greens for late

spring and summer. By using flat pieces of lichen and a very dark green flock, you have pine branches with a snow effect added by touching up the flock with patches of white for a winter scene. You'll be surprised at the difference the addition of foliage makes to your models, making them begin to live.

One form of natural camouflage which is still elusive to me, is the stooks of corn sometimes strewn over assault guns and around the chassis base of field artillery and anti-tank guns. I'm working on it, but if anyone has any ideas, I'd like to hear about it. The beauty of the flock effect camouflage is that those modellers with dioramas using 'neat' lichen trees who are not really satisfied with them, could go back to them and apply the flock method to their trees. You'll be amazed at the difference. Incidentally, the models in the photographs are all 1:76 and are all, without exception, part of a wargame army, but that is another story... □

Left Having fixed the lichen to the netting, coat with PVA and sprinkle with coloured flock. Touch up stem with paint. **Below and right** Tiger II, Airfix Tiger I and converted SdKfz 7/2 embellished as described. All trees are SLS products.



Rail Review



Pug loco and Signal Box conversions by Michael Andress

THIS CONVERSION is based on a prototype I particularly like, No 4 of the Tralee & Dingle Railway. This 3-foot gauge 0-4-2 tank locomotive was built by Hunslet in 1890 and was scrapped in 1908. The extra cab was presumably to give better visibility for the driver whichever the direction of travel. I used the side view sketch in R. W. Kidner's book *The Light Railway Handbook* as my guide in modelling this engine from the Airfix Pug kit. A second cab is required so you will need two kits or a spare left over from another conversion. It is an easy conversion but the resulting locomotive is certainly a little different! My model is unpowered but it should be possible to motorise it in the same way as for the standard Pug.

First step in construction is to cement the right- and left-hand mainframes (Parts

1 and 1a) together and to then extend them forwards by 7 mm and backwards by 4 mm by adding pieces cut from 60 thou plastic card. The wheels and motion are then fitted exactly as described in the kit instructions. I painted all these parts before assembly for neatness and convenience.

The tool boxes are cut away from the footplate (Part 7); this will leave two openings in the footplate but this does not matter as they will be hidden in the completed model. The footplate is then fitted on to the frames with its rear edge level with the rear faces of the extended frames. Cement the two halves of the boiler (Parts 8 and 8a) together and fit the boiler front (Part 9). Use a fine file to remove any irregularity at the join between the two halves of the boiler. Cut away the front 9 mm of the handrail on

each side with a modelling knife and also remove the two slight ridges on top of the handrails, representing the fixings.

Cut the top 2 mm from the chimney and set it aside somewhere safe until you are ready to fit it. The boiler is then cemented to the footplate in the normal position with the lug near the front fitting into the cut-out at the front of the footplate. I cut away the upper part of the cab back (Part 13) above the ridge leaving only a 1½ mm-wide rim at the sides and top. The cab front (Part 12), regulator handle (Part 11), handbrake (Part 16), cab sides (Parts 14 and 14a), modified cab back (Part 13) and cab roof (Part 15) are then cemented in place as in the kit instructions.

The next stage is the construction of the other cab. The two cab sides (Parts 14 and 14a) each have a small piece cut away from the upper part of the front edge of the steps (it will in fact be the rear edge in the finished model as this cab is mounted the opposite way round to the other) so that the edge is straight and vertical instead of curved. The cab front is cut away so that it will fit exactly over the boiler. It can then be pushed on from above (the chimney prevents it being pushed on from the front of the boiler) but don't cement it yet. The cab sides are fitted so that the edges of the steps you cut straight butt on to the front edge of the footplate. The cab front and sides are adjusted so that they fit together properly and then they are cemented to each other and to the boiler and footplate using liquid cement. The cab back is modified in the same way as that of the other cab and it is then fixed into place. The fittings on the top and under surface of the cab roof (Part 15) are cut away and then the roof is fixed in position.

The chimney top is then cemented in place on top of the roof in position lining up with the lower part of the chimney. The buffer heads (Parts 18) have a small depression centrally on each head and these should be filled and then filed and sanded smooth. After painting, the heads are fitted to the buffer beams.

The trailing wheels are 9 mm diameter disc wheels. I used a pair of TT gauge metal wheels already mounted on an axle. I don't know what make they are but I bought them at my local hobby shop and I think they are fairly widely available. I widened the gauge after loosening the wheels by tapping the axle ends with a small hammer while supporting the wheels. The axle and wheels are then fitted by glueing the axle on to the frames 11 mm in front of the rear end of the frames.

The side tanks have sides of 60 thou thick plastic card 32 mm by 8 mm and tops of 20 thou thick plastic card 32 mm by 6 mm. I used the scale couplings from the kit but filed out the centres of the links to give a more realistic appearance. I painted the buffer beams red, the running surfaces of the wheels and the motion bright silver toned down with a thin wash of black, and the rest of the model with Poly S Grimy Black. However, I may add red or green panels lined with white or yellow at a later date.

IN A PREVIOUS 'Rail Review' the conversion possibilities of the Airfix Signal Cabin kit were mentioned and this month I would

Continued on page 606



Two views of the completed 'twin Pug' model.



Revell's New Space Shuttle

NASA's Space Shuttle is the most important step in space exploration since Neil Armstrong set foot on the moon.

The Shuttle 'Enterprise', named after the starship in TV's 'Star Trek', makes its maiden orbit this year.

The Space Shuttle Orbiter is the world's first re-usable spacecraft. After re-entry to the earth's atmosphere it lands like a conventional aircraft, and within two weeks can be readied for another mission.

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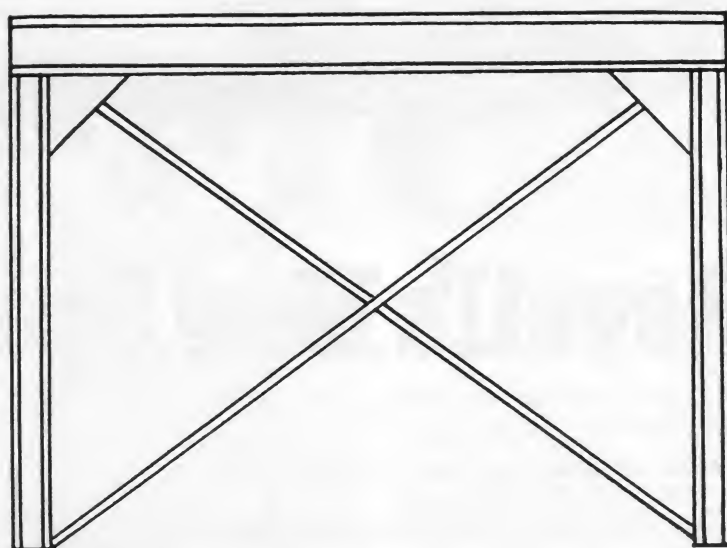


like to describe a specific example in more detail. The type chosen is an overtrack signal box, a structure very different from the original Airfix model but one which is quite easy to build. Parts from two kits are required, although there will be enough pieces left over to build another small signal box as well, together with some Plastruct girders and a little plastic card. Ideally this design of overhead cabin would straddle two sidings beside the main line. Clearances with my model are fairly close because I wanted to use two sets of kit steps and this limited the height possible. It would be worthwhile checking that the clearances are adequate for your track and models before commencing construction and, if necessary, making some modifications.

The cabin itself is the upper half of the kit model. I cut down an already assembled structure but it is even easier to modify the kit parts before fitting them together. I also trimmed off the projecting section of the

platform at the top of the steps. A floor was fitted to the cabin; in my model this was only temporarily fixed in place so that I can remove it later when I have time to add interior details. The appearance of the model will also be improved by cementing clear plastic glazing material behind the window openings. A rectangle 115 mm by 95 mm was made from Plastruct 5/16 inch high 'I' beam (catalogue No B-10) and the cabin was glued on to one end of this. Uprights 62 mm long cut from Plastruct 3/16 inch square 'H' column (catalogue No H-6) were fitted beneath each corner and triangular strengthening pieces cut from 15 thou plastic card were added at each upper corner as in the diagram and photograph. Diagonal bracing strips 1 mm wide cut from 30 thou plastic card were fitted across the shorter sides, again as shown in the diagram.

Most of the photographs I have seen of overtrack signal boxes show either a long single flight of stairs or two shorter flights in a straight line with a landing between. However, I felt that it would look rather more interesting, as well as making a more compact model, if I used two flights with a landing arranged as can be seen in the picture. Each flight is made from the steps and



railing from one kit, with the railings slightly altered. The landing is a rectangle of 30 thou plastic card 21 mm by 14 mm. The extra railings required were made up from strips of plastic card. My model was painted in cream and chocolate for the cabin and the supporting girders grey. □

Top of page and left Two views of the completed overhead signal box model. **Above** 00 scale plan of the gantry. The top 'I' beam is 5/16" high (B-10), the uprights are 3/16" square 'H' columns (H-6); triangular strengtheners and diagonal bracing from plastic card. **Below** Another view of the Pug conversion.



The 'One-O-Wonder' with the 81st TFW described by A. Annis and M. Sudds

THE 81ST Tactical Fighter Wing used two variants of the Voodoo, or 'One-O-Wonder' as it was to become known, the F-101A and C, and was only the second wing to operate them (the first being the 27th TFW, which had the distinction of being the only wing in the USA to receive these Voodoo variants). It was from this wing that most of the aircraft and personnel were drawn to complement the 81st TFW.

To begin the Voodoo story we go back to 1956, when McDonnell had laid down a design for a strategic long-range penetration aircraft suitable for bomber escort duties. Two prototypes were ordered: the XF-88, which first flew on October 20 1948; and a modified version, the XF-88A, which flew in 1950. The same year saw a cutback in defence funds, and the cancellation of the USAF contract, although the following year new Air Force requirements allowed

the project to be revised. However, by this time the XF-88 was felt to be obsolete and was completely redesigned as the F-101, initiated by a contract for 31 pre-production prototypes. McDonnell's chief test pilot, Lieutenant (Bob) C. Little, began the test programme on September 29 1954 and soon encountered serious problems. It took almost a year to mate the airframe with its temperamental Pratt and Whitney J57-P-13 engines and complex electronic equipment had to be developed to overcome aerodynamic problems which could not be eliminated, to aid the pilot in controlling the aircraft.

The last of some 50 F-101As was completed in April 1956, the rest of contract being changed to incorporate the F-101C. This, a fighter-bomber version, was identical to the F-101A in looks and power but was specially strengthened for low-level

operations. It was fitted with a pylon and crutch between its two fuselage-mounted 450 US gallon fuel tanks for carrying nuclear weapons and enabling them to be delivered by the LABS equipment and technique (this method being superseded in 1961).

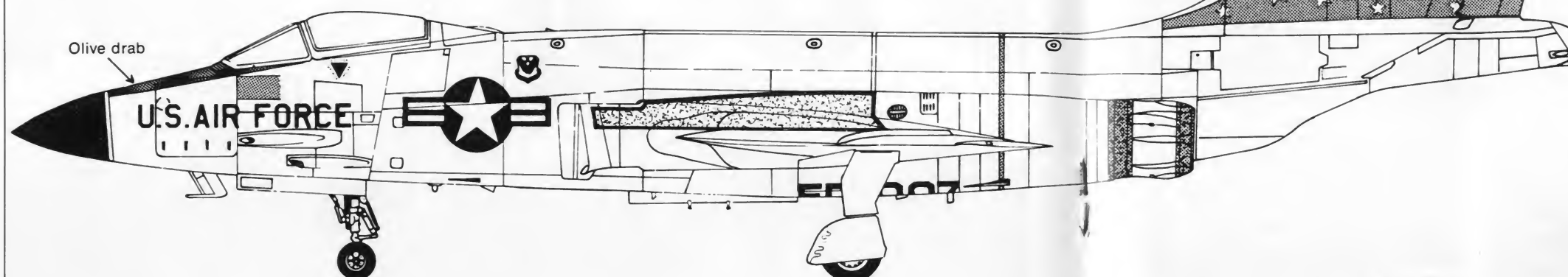
1957 saw a setback for the Voodoo with a change in USAF requirements. As Boeing B-52s began replacing the ageing Convair B-36s, the need for an escort fighter with Strategic Air Command dwindled and so the F-101A entered service with Tactical Air Command in the fighter-bomber role. Tactical Air Command was also receiving the RF-101, a photo-reconnaissance version, at this time. Production in 1957 was being concentrated on the latest variant, the

Top of page F-101 5-60027 at Bentwaters in 1965 (R. Pearce). **Below** F-101A in post-May 1962 markings at Coltishall Battle of Britain Day on September 18 1965. Note absence of Wing badges and newly applied 'O' prefix (A. Annis).



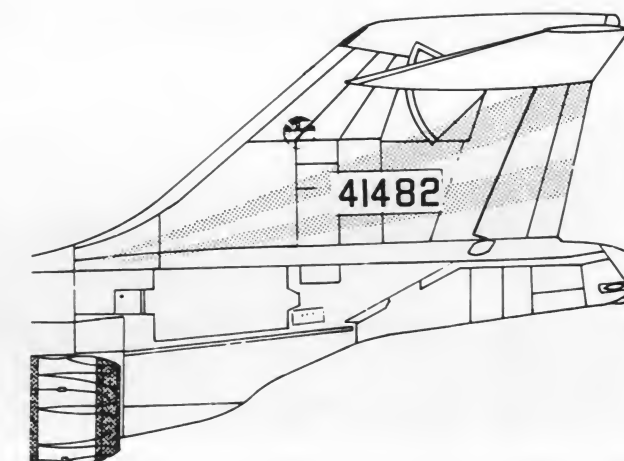
1:72 scale

60027: F-101C. 522nd TFS, 27th TFW. CO's aircraft, 1957. Major J. Burns. Natural metal finish. TAC badges worn behind cockpit. Wing walks light grey outlined dark grey. Wing and tailplane tips red.



Olive drab

Drawings by A. D. Annis



41491: F-101C. 91st TFS, 81st TFW. CO's aircraft, 1960. Colonel J. R. Durose. Natural metal finish. Wing badge behind cockpit. Wing walks light grey outlined dark grey. Crew patch medium blue. Wing fence dark blue. All three squadron badges.

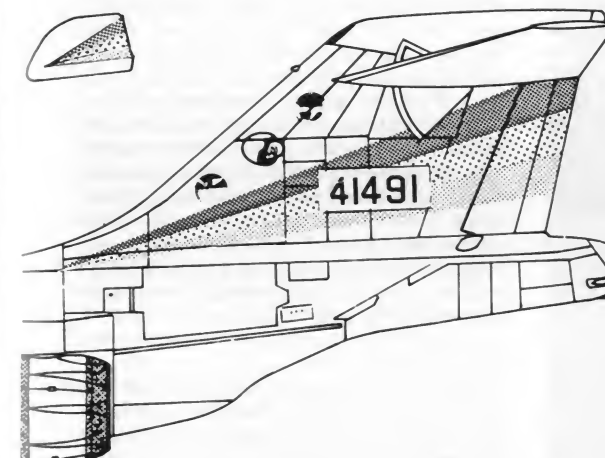
41482: F-101A. 91st TFS, 81st TFW, 1960. Wing walks as 41491. Wheel door markings as 60027. Wing badge behind cockpit. Wing fence and crew patch medium blue.

Wingtip and tailplane markings on both upper and lower surfaces.

41491

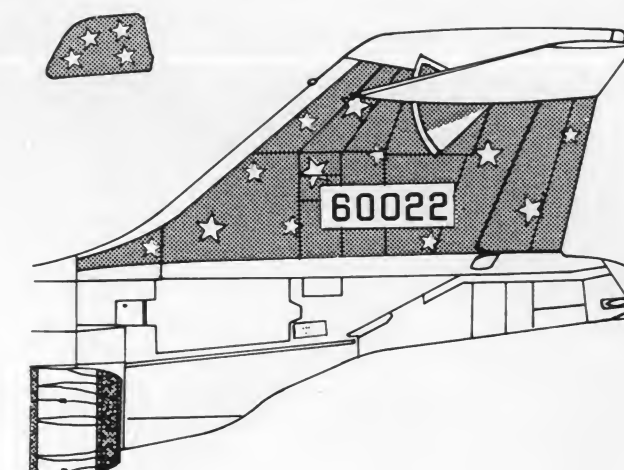
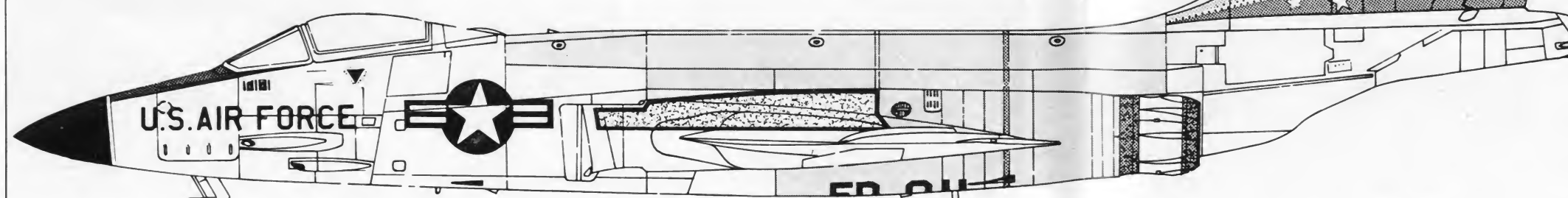
41482

60022



60022: F-101C. 78th TFS, 81st TFW. CO's aircraft, 1961. Lieutenant Colonel P. Styvasent. Wing walks as 41491. No wing badges. Crew patch and wing fences red.

60011: F-101C. 81st TFW. Natural metal with light grey anti-corrosion areas on fuselage. Unit citation under cockpit. No Wing badges.





Above F-101Cs 60009 and 60027 at Leuchars in 1965. Note variation in star positioning (A. Annis). **Left** F-101C 41491, the CO's aircraft in triple colours, at Mildenhall in 1960 (M. Sudds). **Below left** F-101A of the 92nd TFS at Bruntingthorpe in 1960 (A. Annis). **Bottom left** F-101C 60036 in all-grey scheme at Wethersfield in 1964 (A. Annis). **Foot of page** F-101A 41467 of the 91st TFS: solid blue tail with white stars. Main wheel undercarriage doors similarly decorated (A. Annis).

F-101B, a two-seat fighter interceptor for Air Defence Command. Most of the original F-101As had by this time been converted to RF-101s and were entering service with TAC alongside the F-101C.

The F-101A and C Voodoos first entered service with the 27th TFW, TAC, at Cannon AFB in 1957. This wing had the distinction of being the only one in the USA to fly these variants. The wing consisted of four squadrons, the 481st, 522nd, 523rd and 524th TFS, each having its own markings in the form of a solid tail colour adorned with stars. These squadron colours were: 481st green, 522nd red, 523rd blue and 524th yellow. At least 27 stars were carried on either side within the tail colour, these stars being white in all cases except those of the 524th, which were black. Wing and squadron badges were carried below the cockpit, the former on the starboard side and the latter on the port. These markings were later changed, with TAC badges replacing both wing and squadron badges and a reduction in tail stars to 13.

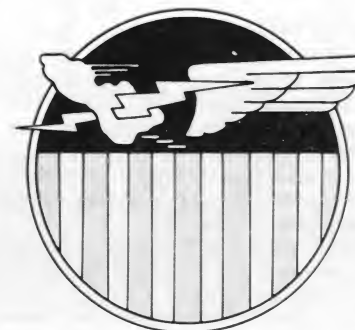
It was not to be too long before both aircraft and personnel of the 27th TFW were to be seen in England as part of the 81st TFW, replacing its F-84Fs. Key members of the 81st TFW were sent to Bergstrom AFB, Texas, to be transitioned into the F-101. At this time the bulk of the 27th TFW personnel and aircraft were brought to England



and dispersed to the three squadrons of the 81st TFW. The 522nd became the 78th TFS at RAF Woodbridge, with the 523rd and 524th TFS becoming the 91st and 92nd TFS respectively based at RAF Bentwaters. Some of the personnel and aircraft of the 481st TFS, the fourth squadron of the 27th TFW, were dispersed between all three squadrons of the 81st TFW.

Mid-1959 saw the 81st TFW adopt the first of three sets of markings carried by the Voodoo while serving with the wing. This consisted of a tail streak design with each squadron having its own colours: red for the 78th TFS, blue for the 91st TFS and yellow for the 92nd TFS. Wing tips, wing fences and crew blocks were all painted in the squadron colour as were main wheel undercarriage doors, which carried a smaller version of the tail streak. The wing badge was worn on either side aft of the cockpit. One exception was F-101C 41491, the mount of Colonel J. R. Durose, CO of the 81st TFW, which carried all three squadron colours in the streak and all three squadron badges on the tail instead of just the one as was usual.

In early 1961 the second marking change was seen, and bore a close resemblance to the earlier scheme worn by the 27th TFW, being 13 stars on a solid background. Wing fences and crew blocks were again coloured together with wingtips, although these were modified slightly from the earlier 27th TFW markings. Main wheel undercarriage doors had a single star centrally mounted on a solid colour. Squadron colours were as worn earlier on the streaked version, but again there were exceptions, mainly for squadron commanders, one in particular being F-101C, 60022, flown by Lieutenant Colonel Pete Styvasent, commander of the 78th TFS, which had four stars on the main wheel doors. It was also during this second phase of markings that



Top left 81st TFW badge. Dragon detail and badge outline black, dragon blue, fangs and claws red, background yellow. **Top right** 92nd TFS badge. Background yellow, skull white, lightning flashes red, outline medium blue. **Above left** 91st TFS badge, Flash and surround yellow, wings and cloud

white, stripes red and white, rest medium blue. **Above right** 78th TFS badge. Yellow background to wording, medium blue inner circle, black wording and outline, red eye and tongue, mid- and dark brown snake's head (drawing by A. D. Annis).



Above F-101A 41482 of the 91st TFS, 81st TFW, in the first scheme. Note blue fin stripes (M. Sudds). **Below** F-101C 60011 of the 81st TFW at Leuchars in 1964. Note light grey areas on fuselage and unit citation (A. Annis).



pilot's bonedomes appeared in squadron colours and stars.

Alas, most of this colour was to be lost when, in May 1962, a new directive was issued to USAF wings concerning tail colours on aircraft. This was due to a new concept in aircraft utilisation, in which they became directly assigned to a wing and not individual squadrons. The three separate organisations of the 81st TFW were eliminated and brought under one command. It was now that all three squadron colours were merged into one marking and applied to the tail on all aircraft of the wing. The stars were retained and superimposed on the solid tail colours in white and black. All other markings were discarded as aircraft also appeared in a sprayed aluminium finish overall. Some had areas sprayed light grey, along the spine from the cockpit to the afterburner area and underneath the fuselage; this was an anti-corrosive paint.

Two aircraft of the wing, F-101A 41457 and F-101C 60036, were sprayed light grey overall with only wing badges worn in the normal positions. The reason for the 'Grey Ghosts' is not known, but was possibly connected with other Voodoo variants flown by SAC and TAC units in the USA which were also finished in this scheme.

The Voodoo was to soldier on with the 81st TFW until 1965, when it was decided to replace it with its superlative cousin the F-4C Phantom. On October 14 1965 the first of an eventual 79 F-4Cs was delivered to the 81st TFW, and saw the gradual run-down of the Voodoo complement. The last five One-O-Wonders left RAF Woodbridge on Monday, January 3 1966 when, like most of the earlier recalled Voodoos of the 81st, they joined the Air Guards of Kentucky and Nevada. Many were modified to RF-101Hs, a photo-reconnaissance version similar to the earlier RF-101C, therefore assuring the Voodoo of an even longer service life.

Aircraft known to have served with the 81st TFW are: **F-101A** 41441, 41444, 41445, 41446, 41449, 41450, 41451, 41452, 41453, 41454, 41455, 41456, 41457, 41458, 41459, 41460, 41461, 41462, 41463, 41464, 41466, 41467, 41468, 41469, 41470, 41471, 41472, 41473, 41474, 41475, 41476, 41478, 41479, 41481, 41482, 41483, 41484, 41485; and **F-101C** 41486, 41487, 41488, 41489, 41490, 41491, 41492, 41493, 60001, 60002, 60003, 60004, 60005, 60006, 60007, 60009, 60011, 60012, 60013, 60014, 60015, 60016, 60017, 60018, 60019, 60020, 60022, 60023, 60025, 60026, 60027, 60028, 60029, 60030, 60031, 60032, 60033, 60034, 60035, 60036, 60038, 60039.

Squadron allocations were as follows. Aircraft frequently changed squadron. **78th TFS 'Bushmasters':** F-101A 41444, 41450, 41455, 41456, 41457, 41458, 41459, 41460, 41463, 41470, 41471, 41472, 41476, 41478, 41479, 41481; **F-101C** 41486, 41487, 60002, 60003, 60004, 60005, 60014, 60015, 60016, 60017, 60018, 60020, 60022, 60025, 60026, 60028, 60030. **91st TFS 'Blue Streaks':** F-101A 41441, 41446, 41452, 41462, 41464, 41466, 41467, 41482; **F-101C** 41488, 41489, 41490, 41491, 41492, 41493, 60001, 60006, 60007, 60011, 60012, 60013, 60016, 60019, 60023, 60029, 60032, 60038, 60039. **92nd TFS 'Avengers':** F-101A 41449, 41451, 41453, 41454, 41457, 41461, 41468, 41469, 41472, 41473, 41474, 41475, 41483, 41484, 41485; **F-101C** 41492, 60006, 60009, 60012, 60016, 60027, 60031, 60033, 60034, 60035.



The infantry

THE PEACE OF 1806-1809, and the military reforms which took place during those years, provide us with two distinct uniform styles; the helmet of 1798-1806 and the shako of the 1809 and 1812-14 campaigns. (The shako was officially introduced in 1806, but the helmet remained in general service until 1808.)

German Fusiliers 1800-08 An all-white uniform with black gaiters; black helmet with black over yellow crest and brass fittings; calfskin pack; dark grey overcoat; round cuffs, collar, turnbacks and shoulder strap piping in facing colour. (See Funcken Vol 2, pages 126-128, for list of 64 regiments.) Officers wore white breeches with boots, gold sash with black threads, and a white tunic without epaulettes. A dark grey frockcoat, with only the collar in the facing colour, was frequently worn in the field by officers.

The men are produced from French Infantry figures, the only problems being the shako and shape of coat front. The latter can be solved by using figures such as the running one or advance *en garde*, where the coat front is hidden, or by a little trimming, or just by painting. The shako head is replaced by one from the Cuirassiers with the crest trimmed down slightly. The best officer figures are either the ACW artillery officer or ACW infantry officer. In both cases replace the head with a cuirassier one. Remove the infantry officer's pistol and holster and trim the legs to form boots. Add a sword or flag stave to the artillery officer.



Napoleonic Wargames Figures

Part 2 — The Austrians
by Terry Wise

German Grenadiers 1809-14 As for fusiliers except a black bearskin cap with brass plate. The cap at the back was either yellow or in the regimental facing colour, with white zig-zag lines. On the right side was a black and yellow cockade. Officers, as fusiliers except for the bearskin. From 1811 turnbacks were supposed to be white but facing colours continued to be used.

The British Grenadiers provide a reasonable facsimile of this uniform, though the coat front is wrong. Trim the lower legs to make gaiters; trim coat front up to cross-belts; cut down bearskin cap at rear to correct shape or just paint as it is; remove plume. Officers may be made up from the mounted officer and flag bearer in the set, with the same minor modifications.

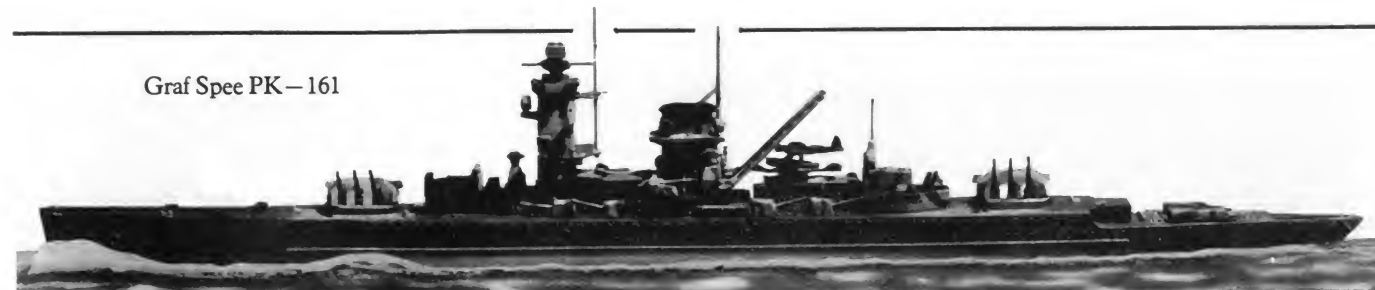
Hungarian Grenadiers 1805-14 As for German grenadiers except: tight-fitting sky-blue trousers with black and yellow braid down the seams and in Austrian knots on the thighs; black ankle boots; pointed cuffs with lace ornament. Officers had gold leg stripes. Again use British Grenadier figures with legs trimmed flush.

German Fusiliers 1809-14 As before but with a shako with peaks back and front, a yellow rosette on the front centre, and a yellow pom-pom with black centre. NCOs' shakos had a thin yellow band round the top; officers' had a broad gold band and

Continued on page 614

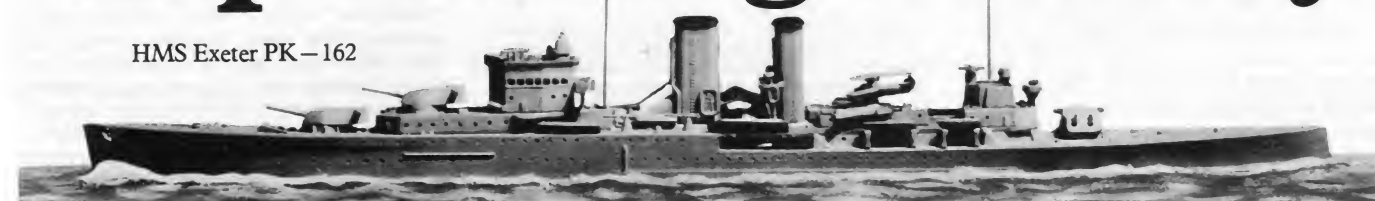
Austrians attacking the French flank at Meaux (1792); Juilly Chateau and redoubt in background.

Graf Spee PK — 161



New threat to Japanese shipbuilding industry.

HMS Exeter PK — 162



The models you see here are two new ships in the "MATCHBOX" 1:700 scale Orange Kit Range.

Below is HMS Exeter B-Class Cruiser, one of the heroes of the "Battle of the River Plate" together with the Ajax and HMNZ Achilles. Above is the majestic admiral Graf Spee, the ship that wrought so much havoc, but which suffered such damage it was forced to seek shelter at Montevideo Harbour only to be scuttled four days later on December 17th, 1939.

To announce the occasion, we asked John Carter (life-long modelling enthusiast and Chairman of the local Berkshire branch of the IPMS) to construct the kits and to give us his unbiased opinion.

All in all, John spent some 70 hours on the project. And, as it happens, the effort proved worthwhile.

"It seemed the Japanese had cornered this end of the market with a whole range of 1:700 scale waterline ships. Quite honestly, for the first two models in the same scale, "MATCHBOX" have done very well indeed.

I like them. I rate them very highly. And on a general note, I'm glad to see that "MATCHBOX" have brought out a British warship

as well — there are not too many about."

The personal touch

Before construction started, John spent 5 or 6 hours on research.

"When you make a ship, you're making it in a certain period of a few months of its life — they change almost as often as humans do."

In fact, details of the Graf Spee are based on actual pictures taken when it was lying damaged in Montevideo Harbour shortly before it was scuttled.

"I was surprised at the quality for the price — one of my first reactions. The mouldings are finely tooled and I was impressed by the general attention to detail"

Nevertheless, the Walrus aircraft aboard the HMS Exeter John rebuilt completely. Cross pieces on masts were replaced with stretched plastic. One or two of the pipes around the chimneys were also tailor made.

"I always do it. There's always something that needs to be refined — with any company's product."

Helpful hints

"The "MATCHBOX" painting instructions are good. They quote Humbrol paint numbers — you can't really go far wrong"

On a more professional basis, John had a few helpful hints to

offer future modellers: the visual impression of a 1:700 scale kit viewed at 4 feet should be that of the real thing viewed at about half a mile. So don't paint anything in pure blacks and whites; avoid vivid colours at all times.

To obtain an effective colour for the aircraft, mix silver with grey. (Straight silver is much too bright for 1:700 scale). Then coat with varnish to give it a slight sheen.

Make roundels out of transfers or use a fine draughtsman's pen. Sea bases can be made from chipboard covered with a simple polyfilla 3:1 water mix worked to get a wave and propeller effect. Again, paint with Humbrol.

And to protect the models, encase in perspex; cases can be bought or made quite easily.

Parting Shot

How do we square up with the competition? John's comment was music to our ears.

"MATCHBOX" have done very well indeed. And if I didn't think so, I'd tell you so."



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The field of Austerlitz, 1805.

thin gold edge to the peaks. The French Infantry set provides these figures, turning a blind eye to the lack of a rear peak on the shako and using running or advancing figures as before to conceal the incorrect coat front.

Hungarian Fusiliers 1809-14 As Hungarian grenadiers but with shako. Use French Infantry figures with gaiter buttons shaved off.

German Jägers to 1806 All grey-green uniform with black gaiters; black helmet with brass fittings and grass-green crest; black belts; grass-green cuffs, collar, turnbacks and shoulder strap piping; equipment as fusiliers. A sky-blue coat, or all sky-blue uniform, was worn by some units. Model figures as for fusiliers of same date. (The 1809-14 Jägers cannot be satisfactorily produced from Airfix figures, although a vague representation can be achieved by using the CSA standing firing infantrymen.)

Frontier Guards 1808-14 There were seven regiments of National-Grenz-Infanterie in 1812, dressed as the fusiliers but with all-black equipment, chestnut-brown coat, Hungarian pointed cuffs, and collar, cuffs

and turnbacks in facing colours: Creutzer and St George, madder red; Brooder and Gradiskaner, pale red; Peterwardener & Wallachisch-Illlyrisches, light grey; Deutschbanater, light blue; 1st and 2nd Szekler, rose red; 1st and 2nd Wallachisches, parrot green.

The cavalry

Cuirassiers 1806-14 An all-white uniform with half boots, blackened steel cuirass, (front plate only) and helmet of infantry pattern. Shabraques red, edged yellow and black with white sheepskin for ORs, black for officers. Facings: white collars for all, cuffs and collar slashes as follows: Kaiser Franz, dark red; Erzherzog Franz Josef and Liechtenstein, black; Herzog Albrecht, bright red; Kronprinz Ferdinand, grass-green; Sommariva, light

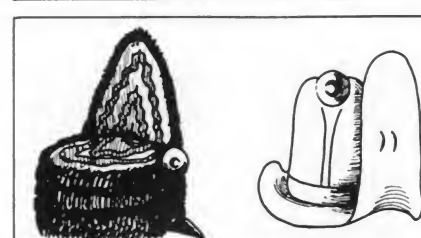
Below Hungarian and German grenadiers from British Grenadier figures. Bottom A Jäger battalion from Washington's Army figures. Below right An 1814 game with my entire Austrian army deployed across the left flank and left centre of the Allied line.

blue; Lothringen, dark blue; Hohenzollern-Hechingen, scarlet. Use Cuirassier figures with crest trimmed down and tops of boots removed. Use Cuirassier horse with sheepskin.

Light dragoons and Cheveau-légers 1805-14 The Emperor ordered these regiments to wear white coats, but the 1798 regulations specified green for dragoons, and both were worn throughout our period, even though green was confirmed as the correct colour in 1805. Kaiser and Hohenzollern Regiments had dark green coats with light red facings; La Tour and Italian (1814) Regiments dark green coats with dark red facings; O'Reilly Regiment white coat with light red facings; Klenan and Rosenberg Regiments white coats with dark red facings. All regiments had white breeches or grey overalls; shabraques as Cuirassiers with white sheepskin. Use Cuirassier figures with cuirass detail removed, the crest reduced a little, and boot tops removed for overalls or half boots (painted on.) Use Cuirassier horse with sheepskin.

Hussars 1806-14 The basic hussar uniform was worn but with a shako: officers' and NCOs' shakos were decorated as German fusiliers. Waist sashes and braid (on chest, cuffs and thighs) were yellow and black for all regiments. Regimental variations were: Kaiser Franz and Szeckler, all dark blue with black shako; Blankenstein and Palatinat, all cornflower blue with black shako; Liechtenstein and Stipsicz, all light blue with grass-green shako; Erzherzog Josef Anton, all light blue with dark yellow shako; Erzherzog Ferdinand Carl, all dark blue with ash grey shako; Hessen-Homburg, bright green pelisse and dolman, bright red breeches, bright blue facings; Radetzky, dark green pelisse and dolman, carmine breeches, dark yellow shako; Kurfurst von Hessen, bright green pelisse and dolman, bright red breeches, black facings; Frimont, dark green pelisse and dolman, carmine breeches, black shako. Grey overalls were often worn instead of breeches and boots. Shabraques and sabretaches were red, edged yellow and black, with white or black sheepskin.

The British Hussar figures with a shako head are suitable for hussars wearing



Left Grenadier cap. Right Jager corse-hut 1809-1814.

breeches: trim off boot tops to create overalls. Use the Hussar horse.

Artillery

Gunners wore a light brown or chestnut coat with bright red facings for Foot, yellow for Horse; white breeches; black gaiters; crested helmet of the infantry-type until 1808, then the shako. Artillery handlers (Handlanger = unskilled ORs) had the same uniform but with sky blue facings. French gunners can be used, either with cuirassier heads or shakos. The Washington's Army figure carrying a barrel makes a good Handlanger if given a new head.

The Services

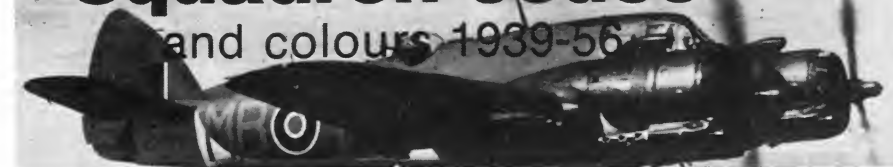
Transport Corps 1809-14 This includes drivers for artillery teams. All-white uniform with yellow collar, cuffs and turnbacks (no shoulder straps); black belt; black shako with cockade and pompom as fusiliers; short boots. Officers wore a dark grey tunic with gold facings and had the bicorne. Use RHA drivers with shako heads and braid removed. Mounted officers are from the Highland officer with bicorne head and epaulettes, belt and sash removed. In my own artillery I use dismounted drivers made from French gunners without packs.

Pioneer Corps 1809-14 All-white uniform with grass-green facings, black gaiters and the corsehut hat with large, upturned flap on the left side. CSA infantry can be pressed into service here.

Sappers and Miners 1809-14 Grey coat, white breeches, brown half boots, cherry red facings. Pontoniers wore an almost identical uniform. Again use CSA infantry; the figure with boots.

Artillery pieces and equipment will be dealt with in separate articles at the end of the series. □

Squadron codes and colours 1939-56



By Michael J. F. Bowyer and John D. Rawlings

T4 Carried on the B-24s of the 847th Squadron of the 489th Bomb Group, USAAF, from Halesworth between May and November 1944.

T5 Allocated to Station Flight, Abingdon, no known use.

T5 Carried on the P-47s of the 10th Squadron of the 50th Fighter Group, USAAF.

T6 Allocated to Station Flight, Melbourne, no known use.

T6 Carried on the B-26s of the 573rd Squadron of the 391st Bomb Group, USAAF.

T7 650 Squadron This AAC unit used 'T7' on its aircraft from December 1943 until June 1945, eg, Martinet TT 1 T7-M:HP175.

T8 Carried on the B-24s of the 853rd Squadron of the 491st Bomb Group, USAAF, from Metfield and N Pickenham between April 1944 and July 1945.

T9 Carried on the B-24s of the 784th Squadron of the 466th Bomb Group, USAAF, from Attlebridge between March 1944 and July 1945.

3T Allocated to Station Flight, Acaster Malbis, no known use.

4T Carried on the B-26s of the 586th Squadron of the 394th Bomb Group, USAAF.

4T Allocated to Station Flight, Portreath, no known use.

5T 233 Squadron (c) When this squadron became a transport squadron at Blakehill Farm on March 5 1944 its Dakotas were coded '5T', which code it retained until August 1945 when it transferred to the Far East, eg, Dakota III 5T-UQ:KG403.

6T 608 Squadron (c) Re-formed as a bomber squadron with Mosquitos at Downham Market on August 1 1944 No 608 Squadron was coded '6T', eg, Mosquito B 20 6T-F:KB212; Mosquito

B 25 6T-V:KB413; Mosquito B 16 6T-D:PF505. After World War 2 it re-formed as an Auxiliary unit and from 1949 to 1951 was again coded '6T', eg, Harvard T 2B 6T-N:FT457; Spitfire F 22 6T-3:PK340; Meteor T 7 6T-O:WA671; Oxford T 1 6T-M:NM409.

7T 196 Squadron (c) From November 1943 this bomber squadron transferred to 38 Group flying Stirling IVs and from around April 1944 was coded '7T', eg, Stirling IV 7T-F:PJ957.

8T 298 Squadron (c) 'B' Flight of this squadron was coded '8T', re-forming at Tarrant Rushton on November 4 1943 and flying Halifax glider-tugs on the D-Day, Arnhem and Rhine Crossing operations until moving to India in August 1945 when the code was dropped, eg, Halifax III 8T-C:NA667.

9T Signals Flying Unit (c) This Honiley-based unit carried '9T' on its various aircraft for the last 18 months or so of the war, eg, Wellington X 9T-Z:NC885; Oxford I 9T-S:PH345.

UA 269 Squadron (c) This Coastal Squadron carried UA from September 1939 through until at least the end of 1942 on Ansons and Hudsons flying from UK and Iceland, eg, Anson I UA-J:K6244; Hudson I UA-B:N7303; Hudson III UA-N:T9465.

UA Carried on the C-53s of the 43rd Squadron of the 315th Troop Carrier Group, USAAF.

UB 455 Squadron (c) This RAAF Squadron was formed at Swinley on June 6 1941 as a bomber squadron with Hampdens. In April 1942 it transferred to Coastal Command and eventually re-equipped with Beaufighter Xs. It was disbanded on May 25 1945. Examples: Hampden I UB-X:P1244; Hampden TB1 UB-W:AE296; Beaufighter X UB-B:NE444.

UB 164/63 Squadron (c) After World War 2 No 164 Squadron at Middle Wallop was equipped with Spitfire LF 16Es coded UB. On September 1 1946 it

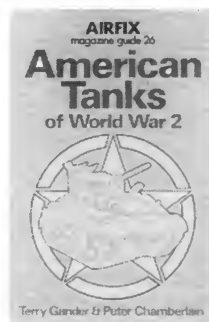
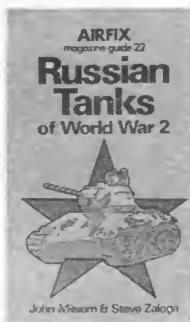
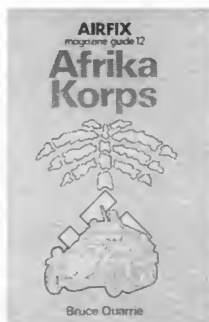
Continued on page 618

141 Squadron's Mosquitos (like this NF 36) were distinguishable after the war not only by their 'TW' codes but also by their black and white spinners.



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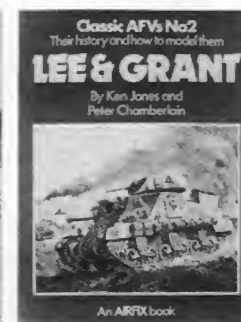
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A7/78



was re-numbered 63 and retained the UB code, subsequently carrying it on Meteors before giving way, in 1950, to black/yellow check markings. Examples: Spitfire LF 16E UB-B:TE202; Meteor F3 UB-F:EE292; Meteor F4 UB-B:VT198.

UD 452 Squadron (c)

Formed as a fighter squadron in the UK on April 8 1941, 452 was a RAAF unit in the Kenley Wing. It flew Spitfires coded UD until moving to Australia in June 1942, eg, Spitfire VB UD-E:BL906.

UE 228 Squadron (c)

This Sunderland squadron originally carried DQ on its aircraft but about mid-1943, probably after carrying a single number for a while, used UE, eg, Sunderland III UE-J:ML763.

UF 601 Squadron (c)

This code was carried throughout World War 2 by No 601 (County of London) Auxiliary Squadron in the Battle of Britain in 1940, the 1941-42 channel sweeps, North Africa, Malta, Sicily and Italy. Examples: Blenheim IF UF-K:K7178; Hurricane I UF-B:V7104; Hurricane IIB UF-N:Z2579; Airacobra I UF-N:AH587; Spitfire VB UF-V:ER220; Spitfire IX UF-P:PV238.

UF 24 OYU (c)

After 601 Squadron had gone overseas this code was used by 24 OTU on Wellingtons and Hurricanes (for fighter affiliation), eg, Wellington X UF-H:NC651; Hurricane IIC UF-X:PG548.

UG 16 Squadron (c)



Above UF-coded Blenheim 1Fs of 601 Squadron at Tangmere in early 1940. **Left** This Hudson, T9465, a gift from Lockheed employees, flew with 269 Squadron in Iceland in 1941 (IWM). **Right** Hurricane IIBs of 601 Squadron on a Channel sweep during 1941 (IWM). **Below** 576 Squadron only existed as a Lancaster squadron. PD235 is shown here (Air Ministry Official. R. L. Ward via G. Burke).



When 16 Squadron entered World War 2 its code was changed from KJ to UG and this was carried on its Lysanders and subsequent types at least until the Mustang I period in mid-1942, eg, Lysander II UG-J:L4807; Gladiator II UG-D:N2304.

UG 1654 HCU (c)

Formed at Swinderby in 1942, this HCU used Manchesters and, from Wigsley, Lancasters. In 1943 it also used Stirlings for a short while, eg, Manchester I UG-B:L7419; Lancaster I UG-ED308; Stirling III UG-K:EH923.

UH 21 OTU/202 CTU (c)

This Moreton-in-Marsh-based OTU flew Wellingtons throughout, using UH as one of its codes. The code was perpetuated after World War 2 when the OTU had moved to Finningley and been re-numbered 202 CTU, eg, Wellington X UH-Z:LP156; Oxford I UH-J:PH177; Martinet I UH-X:JN301.

UH 1682 Flight (c)

This Flight, used for Fighter Affiliation and similar duties, carried UH on its Hurricanes and Spitfires, eg, Hurricane IIC UH-F:LF743; Spitfire LF16E UH-F:SL756.

UJ 27 OTU (c)

This OTU was formed at Lichfield on April 23 1941 and throughout World War 2 was a Wellington unit used for training bomber crews, eg, Wellington X UJ-P:JA342.

UK

Carried by Proctors of a Communication Flight, possibly belonging to CFE, eg, Proc-

tor III UK-7:Z7248.

UL 608 Squadron (c)

This Coastal Auxiliary squadron carried UL on its aircraft from the outbreak of World War 2 until 1942/43, eg, Anson I UL-M:N5199; Botha I UL-N:L6208; Blenheim IV UL-U:V5537; Hudson V UL-R:AM642.

UL 576 Squadron (c)

Formed at Elsham Wolds on November 25 1943, this squadron operated as a 1 Group Lancaster squadron from there and Fiskerton until disbanding on September 13 1945, eg, Lancaster I UL-E:PA318.

UM 152 Squadron (c)

This code combination was used by 152 Squadron from its re-formation at Acklington on October 1 1939 throughout its participation in Fighter Command until 1942 and then through North Africa, Malta, Sicily, India and Burma on Gladiators and Spitfires, eg, Gladiator II UM-M:N5640; Spitfire I UM-B:R6801; Spitfire VC UM-V:LZ807; Spitfire IX UM-Q:JL170; Spitfire VIII UM-N:MT948; Spitfire XIV UM-G:RM908.

UM 626 Squadron (c)

This 1 Group Lancaster squadron flew UM-coded aircraft from Wickenby during its entire career from November 1943 until October 1945, eg, UM-P:RF156.

UN

Carried on the P-47s of the 63rd Squadron of the 56th Fighter Group, USAAF, between February 1943 and September 1945.



UN

Allocated to Station Flight Faldingworth but no known use.

UO 266 Squadron (c)

Formed on October 30 1939 as a fighter squadron at Sutton Bridge, 266 carried UO on its Spitfires and Typhoons until mid-1942 when the code was changed to ZH, eg, Spitfire I UO-K:N3178; Spitfire VB UO-P:W3834; Typhoon IA UO-A:R7641.

UO 19 OTU (c)

This Kinloss-based OTU used Whitleys and Wellingtons for bomber training between May 1940 and June 1945, eg, Whitley V UO-Ca:P4938; Wellington X UO-D:NC740.

UP 605 Squadron (c)

This code combination was carried by this, the County of Warwick Auxiliary Squadron, during its war service but, it is believed, not until re-equipping with Bostons and Havocs in July 1942, no evidence of it having been used before then having come to light. Examples are: Havoc II UP-X:W8389 (possibly); Mosquito II UP-K:DZ760; Mosquito FB VI UP-T:RS678.

Below left 601 Squadron was the only RAF squadron to fly the Bell Airacobra, and then only briefly (IWM). (For a detailed account of Airacobras in RAF service, see *Airfix Annual for Aircraft Modellers*, to be published in September.) **Below** Spitfire IXs of 152 Squadron in Italy shortly before leaving for the Far East (IWM).

British Army uniforms

1660-1900



The Heavy Brigade at Balaclava October 25 1854
by Bryan Fosten

AT DAYBREAK on October 25 1854, the British cavalry paraded in a valley about an hour before dawn. Shortly, it was reported that the Russians, with 25,000 infantry, 34 squadrons of cavalry, and 78 guns, were advancing on our lines of communication. They were advancing in two great masses, one on their left coming from Kamara and the second moving towards the redoubts on the Causeway heights. There was a single battalion of Turkish infantry holding Canrobert's hill but these were shattered by intense cannon fire which decimated their thin tanks. A Russian force of five battalions with six more in support swept over these positions and had captured the redoubts by 7.30 am.

Meantime the centre columns, massed close and marching swiftly, were threatening the Causeway heights. They were supported by 3,000 cavalry and with the Turks badly mauled and fleeing from their positions, all that remained between the massive cavalry formation and Balaclava was a battalion of the 93rd Highlanders, 550 in strength, commanded by their Brigadier Sir Colin Campbell. The Highlanders stood firm and fired a beautifully executed volley as soon as the Russians came within range. They stopped and retired.

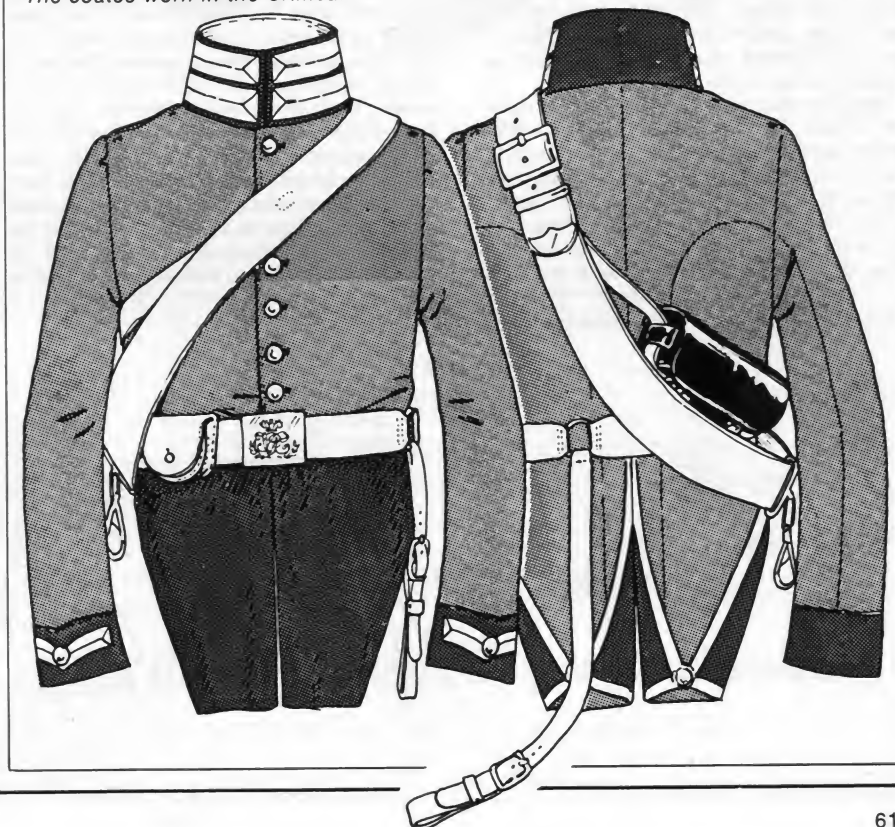
Meantime the main body of the Russian cavalry pressed on for the Causeway

heights. They had not been seen at this stage by the British as there were no scouts on that particular flank.

General Scarlett's Brigade of Heavy Cavalry comprised squadrons of the 4th Dragoon Guards, 1st Dragoons (The Royals), 5th Dragoon Guards, 2nd Dragoons (The Scots Greys) and 6th Dragoons (Inniskillings). His regiments were in two parallel lines. The nearer, inner line, comprised the Scots Greys and a squadron of the Inniskillings, the outer another squadron of the Inniskillings and the 5th Dragoon Guards. In the rear were the Royals and the 4th Dragoon Guards.

The Russian cavalry were halted and their officers appeared indecisive. Scarlett did not hesitate. He ordered his first column to wheel into line, composed of about 300 sabres, and ordered the charge. The second line was similarly ordered into line and followed. Scarlett headed the charge himself riding erect in the saddle closely followed by his ADC, Alick Elliott, and his personal orderly and trumpeter. The four, General Officer, ADC and two troopers had galloped away from the main body of their men and consequently crashed first and alone into the dense mass of greatcoated Russians. Immediately they were engaged man-to-man, fighting for their lives. Scarlett himself received five wounds and Elliott

The coatee worn in the Crimea.





5th Dragoon Guards' helmet.

14 before the leading British squadrons drove in behind them. Three British batteries firing from the high ground found the range of the rear of Russians and their shrapnel tended to force the enemy cavalry into a tighter and more unwieldy formation.

The Inniskillings followed Scarlett into the enemy mass, followed by the Greys, and on each flank rode the other squadron of the Inniskillings and the 5th Dragoon Guards, all followed by the Royals who had time to raise a real gallop. The Russian squadrons on their front attempted to deploy but this manoeuvre only confused the squadrons in the rear.

A contemporary account says, 'The impact of our charging men carried all before it. Swords rose and fell... then the vast mass of Russians broke up — three thousand conquered by eight hundred — and turning, rode fast and in disorder from the field with the British Dragoons, having ridden through, turning and forcing their way back hacking and slashing without pause...'

A French General who watched the action afterwards called it 'the most glorious thing he ever saw'. Sir Colin Campbell rode to the Greys, took off his bonnet and said 'Greys, gallant Greys, I am 61 years of age, but if I were young again I should be proud to serve in your ranks'.

The Dragoons and Dragoon Guards wore the 'Albert' pattern spiked helmet. The helmet was white metal for the Royals and the 6th Dragoons, and brass for the other regiments. Officers' helmets were silvered or gilt brass respectively. The plume was not worn in the Crimea. The Scots Greys wore a black bearskin cap with a white

hackle on the left side. All the headdress had chin chains either steel or brass and in summer the helmets were covered in a white quilted material with a neck curtain. Officers favoured the undress peaked cap which had a gold figured band and a small button and a figure of Russian braid on the flat top. The gutta-percha peak was embroidered in gold round the edge.

Officers wore a scarlet coatee with collar, cuffs and turnbacks of the facing colour. The facings of the Dragoon Guards were in velvet. The coat was single-breasted with nine gilt buttons down the front. The collars had two loops of lace on each end; the turnbacks were edged with lace and had embroidered ornaments. The Dragoon Guards had four lace loops, in chevron form, on each sleeve placed in pairs, the Dragoons three at equal distances. For the Dragoon Guards the loops were in gold embroidery and in the Dragoons, gold lace. The officers' rank was displayed on gold bullion epaulettes, with straps and crescents embroidered in gold. The regimental badge of the regiment embroidered in silver within the crescent and the strap and crescent were on facing colour velvet or cloth. These may have been discarded on active service. On active service the officers are likely to have also discarded the expensive full dress crimson and gold tasselled sash, laced pouch and sword belts and worn, in their stead, plain white leather pouch belt, with plain undecorated black leather pouch, a broad white leather sword belt, worn over the coatee with the sword supported on two white leather slings. White leather gauntlet gloves were worn.

The undress overalls worn on campaign were dark blue with a broad red stripe and were usually reinforced with black leather booting and strapping up as far as the knee. Their cloaks were scarlet, lined white. Behind the saddle a round red valise was carried which had the initials and/or number of the regiment in gold embroidery. It is clear from photographs that there was great deal of liberty taken in the dress worn by officers in the Crimea. Many, for example, seem to have favoured the short, round, stable jacket which was made of scarlet cloth and closed down the front by hooks and eyes, the edge decorated with small studs, put on so close that they touched. Many wore heavier coats over their coatees based on the reefer jackets worn by the Navy and there is a note in the Reynolds Collection confirming that an officer of the Greys had said to him that

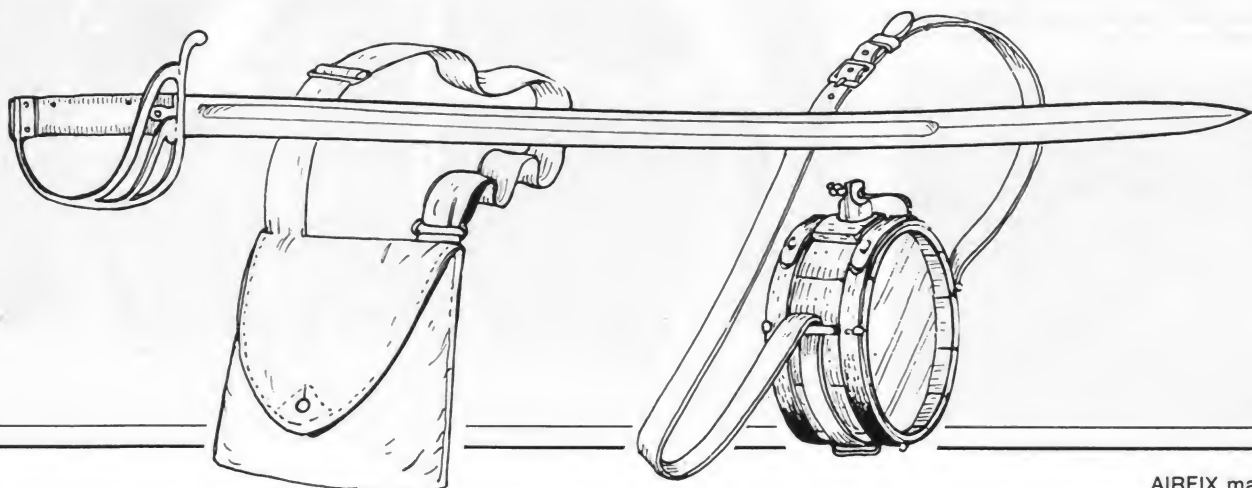
they wore 'reefer jackets and did not appear at all like officers of Dragoons'. Couple the reefer jacket with the undress cap and put our officers in booted and strapped overalls and we can see what Reynolds' correspondent meant! The coatee worn by other ranks of Dragoon Guard and Dragoon regiments was made in red cloth for all except the Carabiniers (6th DG) who had reverted to their traditional blue in 1851.

The collars, turnbacks and cuffs were in the regimental facing colour and the coatee was single-breasted with eight buttons down the front, and had simple round cuffs. The front of the collar was laced in yellow and the turnbacks were similarly decorated. On each shoulder a brass ornament was worn. This comprised a scaled strap part with a crescent end. They wore blue overalls with scarlet stripes down the outside of each leg. These were reinforced up the insides of the legs and around the bottoms of the legs with leather. The NCOs and troopers carried the sword from a broad white leather waistbelt with a square solid brass buckle in front. The sword was suspended on white leather slings from brass rings. The belt was fitted with a small leather pouch to contain the carbine percussion caps. The pouch belt/carbine swivel belt was also white leather and the large black leather pouch had no ornament. Over the right shoulder a canvas haversack for the daily ration was slung together with the heavy, ugly, blue-painted water canteen on a leather strap. Most officers and men were either fully bearded or had large moustaches.

What did Scarlett wear? This is conjectural. A portrait of the General shows him wearing what appears to be a special black leather version of the Albert helmet, without plume. His body garment is a dark blue undress frock coat with two rows of gilded buttons, blue collar and cuffs, gold painted cords on his shoulders and Oxford mixture trousers with 2½-inch wide scarlet stripes down the outsides of the legs. The gold and crimson sash is worn over the coat together with the Russian leather sword belt with three stripes of gold embroidery. White gloves.

Facing colours were as follows: 4th Royal Irish Dragoon Guards — dark blue; 5th Princess Charlotte of Wales's Dragoon Guards — green; 1st Royal Dragoons — dark blue; 2nd Royal North British Dragoons — dark blue; 6th Inniskilling Dragoons — primrose yellow. □

Haversack, water bottle and sabre of the period.



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58. Private, Grenadier Coy., 1st Foot Guards, 1704

59. Officer, Battalion Coy., 1st Foot Guards, 1704

60. Private, Battalion Coy., 1st Foot Guards, 1704

61. Trooper, 3rd Brandenburg Hussars, 1914

62. Pathan tribesman

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Wheels of the RAF



Part 10 — WW2 Type Number Marking by Bruce Robertson

EARLY IN 1944 it was decided that with such diversity of mechanical transport vehicles a key type number should be allotted to each different vehicle type to facilitate identification for ordering spares. Numbers were allotted in blocks according to the class of vehicle, reserving Nos 1 to 999 for specialist signals vehicles, numbers from 1000 to 4999 for prime movers other than signals vehicles, and 5000 and over to trailers.

This type number was painted on the nearside (ie, left side) cab door of prime movers and in a conspicuous position on trailers. White three-inch characters were

specified in the style TYPE 1201 or TYPE 1201.

The allocation of type numbers to vehicles gives a good insight into the diversity of wheeled transport and these are listed in detail, giving the type number and a short description of the vehicle type.

Tenders	
1100	6-ton transporter
1104	Oxygen plant
1105	Parachute drier
1106	Parachute servicing
1107	Fuel, 2,500 gallons
1108	Snow clearance

Below A crane of a RCAF unit (note red maple leaf in centre of roundel), supplied with RAF equipment for use with the 2nd Tactical Air Force in France, bears the RAF Type number on the cab. **Right** A 2nd TAF specialist signals vehicle, mounted on a Crossley 3-ton chassis as Type 405. The No 15071 below the type number is a TAF unit serial number and not, as may be thought, its official number RAF 134121 which appears on top of the cab front. The chalked '5' is its convoy number. The RAF roundel is balanced on the opposite side of the radiator by the letters TAF (Tactical Air Force), 84 (Group number), 04 (unit number within Group).



1109-11	10-, 15- and 20-ton
1200	5-ton
1201	Balloon winch
1202	Bomb carrying
1203	Hydrogen cylinder
1204	Pantehnicon
1205	Sullage
1206	Tipping
1207	Air compressor
1208	18-ton transporter
1300	3-ton
1301	Fire, crash
1302	Flying control
1303	Floodlight
1304	MT breakdown
1305	Office
1306	Operations room
1307	Fuel, 1,000 gallons
1308	Fuel, 2,000 gallons
1309	Photographic
1310	Power 7 kilowatt
1311	Power 6.3 kVA
1312	Water, 350 gallons
1313	Workshop
1315	Sound channel
1316	Pantehnicon
1317	Photo, power and water
1318	Water, 670 gallons
1319	Dental surgery
1320	Dental workshop
1321	Petrol, 2,500 gallons
1322	Bomb carrying
1323	Fuel, 350 gallons
1324	Hydrogen compressor
1325	Water, 300 gallons
1326	Cooking
1327	Store
1328	Water, 500 gallons
1329	Fuel, 550 gallons
1330	Tipping 3-ton
1400	30 cwt
2201	Fire, domestic
2500	Water, 200 gallons
2803	X-ray unit
2804	Road sweeper
2806	Refuse
Tractors	
1000	Articulator
2600	Light
2601	Light with winch
2700	Heavy
2701	Heavy crawler
2702	Works
2703	Semi-tracked
3013-16	Classes I to IV
Vans	
1314	Recruiting
1401	Pre-heater
1500	15-cwt
1501-2	Bread/meat store
1503	Welder
1504	Navigation trainer
1505	Bomb-sight/servicing
1600	5/10 cwt
1601	Letter sorting
Cars	
1603	Air Officers Commanding
1604-5	Passenger heavy/light
1900	5-cwt 4x4
2000	Passenger, utility, heavy
2001	Touring
2002	Passenger, utility, light
Trucks	
2800	Platform elevating
2801	Works
2802	Stacking
Cranes	
1101	Extra heavy
1102-3	Heavy/light
Ambulances	
1700-1	Heavy/light
Rollers	
3010	2½ ton
3011-2	5 to 6 & 8 to 10 tons
Miscellaneous	
1700-1	Ambulance, heavy/light



1800	Armoured Fighting Vehicles
2100	Coaches
2200	Freighters, store
2300	Mechanical horse
2400	Refuellers petrol and oil
2900	Motorcycles
2901	Motorcycle combinations
3000	Ditchers
3001-2	Dumpers Mks I & II
3007	Hi-Lift shovel
3008	Paver concreter
3009	Power graders
Trailers	
(Note 5000-12 articulated)	
5000-2	Various types
5003	Air bottle
5004	Air compressor
5005	Photo servicing
5006	Photo film processing
5007	Photo multi-printing
5008	Film office and store
5009	Torpedo-carrier
5010	Workshop
5011	7-ton
5012	Fuel, 2,000 gallons
5100	Flat, 2-wheel
5101-2	Caravan 4- & 8-berth
5103	Caravan with astrodome
5104	Dental caravan
5106	6.3 kVA power unit
5107	MT servicing
5108	Water, 150 gallons
5109	1-ton tipper
5110	Air compressor
5111	High-pressure Jenny
5200	Flat, 2-wheel
5201	Aerial lighthouse
5202	Balloon winch
5203	Bomb carrier
5204	Cooking
5205	Decompression chamber
5206	Dental
5207	Floodlight
5208	Hydrogen cylinder
5209	Landmark beacon
5210	Office
5211	Oxygen plant
5212	Oil 450 gallons
5213-4	Petrol, 450/900 gallons
5215	Photographic
5216	7 kilowatt power unit
5217	Store
5218/24	Water, 300 gallons
5219	Woodworking
5220	Workshop
5221	Oil, 500 gallons
5222-3	14 kW/20 kVA power units
5300	Fiat, 8-wheel
5400	Excavator transporter
5401	Fuselage transporter
5402	Mechanical horse fittings
5403	Parachute drier
5404	Parachute packing
5405-6	Silicol A2/B2 types
5407	Tipper
5408	Works laboratory
5409	Works trucks
5410	Works 15/25-ton
5411	Workshop plant
5412	3-ton recovery
5413	Generator 60 kW

The painting of the Type numbers was notified on September 14 1944 as being no longer necessary, but since deletion was not specified most vehicles kept these numbers until the end of the war. On the other hand Radio Vehicles were to be the exception to the rule, and from December 7 1944 it was made mandatory for such vehicles to be marked on the left side. This marking, in three-inch letters in white, bore the wording TYPE and the RVT number. In general it was marked near the cab of prime movers and on the forward side of trailers. □

NEW KITS AND MODELS

Revell Phantom F4e

REVELL SEEMS to have really pulled out the stops in the race to get new 1:48 scale kits on the market and follow their F-104 and MiG 21 with a very nice F4E or F4F Phantom.

This kit would not win any prizes for the definitive version of this popular subject but it can be made into a reasonable replica and provide a lot of pleasure to the builder.

The bulky shape of the McDonnell heavyweight comes over well and attention to such detail as the intake at the base of the fin, the thinness of the flying surface trailing edges and the delicate fins on the guided missiles are all worthy of note when compared with some other kits from Revell which have been heavily criticised. Having said that, knuckles must be rapped for the poor definition on the ejector seats, the overscale pressure heads on the fin and the excess amount of flash which has crept back in this kit.

The decal sheet is very comprehensive and contains all stencil markings as well as individual markings for an F4E of the USAF or an F4F of JG 74. Unfortunately the background for the USAF stars and bars is again black and the red centre bars were very much off register, but such markings are not too hard to come by and should not present the keen modeller with any major problems.

There will undoubtedly be better 1:48 scale Phantoms in the years to come, but meantime if you are a 'Phantom Phan' and want to make a start in this size, the Revell kit is worth having.

Rareplanes Reaper

THIS OFFERING from Rareplanes typifies the ideal vac-form kit, it is well produced, well packed, contains clear instructions and is a subject which is unlikely to be featured by the injection-mould manufacturers,

although in view of some of Heller's releases in the last few months, the latter statement might well be a case of sticking one's neck out.

Gordon Stevens, the man behind Rareplanes, seems to have a knack of keeping well ahead of his competitors and quite rightly does this by concentrating on quality rather than quantity, and does not need to resort to the type of gimmickry used by some producers of this type of kit.

The 1:72 scale Fokker G-1 Reaper comes on one sheet of plastic card and one sheet of clear plastic. The latter contains the fuselage halves on which the many windows have been clearly etched, leaving the constructor with a delicate painting job which enables a very smooth fuselage to result if it is carried out with care. The wings, twin booms, engines, wheels and propellers are all included on the white plastic card sheet and have the type of detail one now associates with Rareplanes.

Markings are not included but there is plenty of reference material quoted on the very clear instruction sheet to enable those who build the model to find just what they want.

Heller Dauphin SA 365

HELICOPTER FANS who want to lavish their love on a really good kit could do no better than invest in Heller's latest 1:50 scale release of the SA 365 Dauphin.

The lines of this attractive French design, which first flew on January 24 1975 and can be used in both military and civil roles, have been faithfully captured by the kit designer and the 59 parts fit together with commendable ease.

The size of the aircraft is such that there is tremendous scope for additional detail, especially in the cockpit area where Heller have provided a good basic starting point with well detailed seats, floor, control columns and instrument consoles.

Rareplanes' new Fokker G-1 'Reaper' in 1:72 scale.





The latest addition to the Hornby range of station and lineside buildings is the snap-together signal box kit seen above. The model comes partly assembled for simplicity and only the windows need to be cemented in place. The kit includes a range of name plate decals, and decals for the interior clocks, train indicator and lever panel. The model retails for £1.95 and is an excellent product for the youngster just starting a layout or for the expert to exercise his super-detailing talents upon.

The eight pieces which go to make the rotor head are very delicate and great care must be exercised during assembly.

The instruction sheet leaves no doubt as to where the multitude of small pieces go and there are adequate painting instructions for the interior and exterior of a civil version.

The matt finished grey plastic takes white paint very well, and three very fine coats produced a beautiful finish.

If you have become hooked on 1:48 and want a change from the jets which are currently being produced in this scale, the Dauphin will provide it.

Airframe Pterodactyl V

AIRFRAME OF Canada was one of the pioneers of vac-form kits and over the years the company has earned itself a reputation for producing the unusual in accurate, unfussy mouldings. Although the kits do not have the surface detail one has come to expect from Rareplanes, the mouldings themselves are crisp and what detail there is is accurately portrayed with nice straight lines, unlike some vac-form kits which appear to have been walked all over by a one-legged inebriated spider.

The latest offering is the unusual Westland-Hill Pterodactyl V in 1:72 scale which is formed on two sheets of 30 thou plastic card and makes an ideal first-time subject for those who want to try a vac-form kit.

Wing ribbing detail is excellent and once

the parts have been cut from the sheets they go together with commendable ease. Full instructions are supplied and these quote useful reference sources for those who want to study the subject in greater depth. The price of the kit is not known but presumably it will soon start to appear in the ads of the specialist mail order houses.

Heller Bf 109B

HELLER HAVE added yet another Messerschmitt Bf 109 to their range which is now the most comprehensive in the world as far as the German fighter is concerned. I suppose it was inevitable after going from one end of the range with the K to the other with the E then jumping to the Bf 108, the interim B model had to follow.

The 1:72 scale kit which now fills the gap, can be assembled in two versions, either the B1 or C1, and appropriate markings for either are supplied. In the case of the B-1 the unit chosen is 2/J 88 of the Legion Condor in Spain 1937, and the C-1 a machine of 9/ZG 26.

The overall representation is good but

the drilling out of the exhaust stubs, and the spinner of the B-1, but to offset this are many delicate parts which include tiny mass balances and oleo calipers. Once again Heller must take a bow for providing a long-awaited addition to the Bf 109 range, even if it is perhaps not quite as good as the F-84 and J 29 which reached us in the same consignment.

Ploughing engines

ENTHUSIASTS OF steam engines, traction engines, road rollers, etc., will be delighted with this latest kit from W & T Manufacturing which first caught our eye at the Birmingham Toy Fair. W & T Manufacturing are well known for their model railway equipment and their range of white metal kits of cars, vans and horse-drawn vehicles in both '00' and 'N' gauge. Their latest kit of a pair of Fowler steam ploughing engines is sure to be popular.

The character of these majestic working engines has been caught in these kits and the promised later release of a plough to complement the pair of engines will com-



The component parts of the W & T Fowler steam ploughing engines kit reviewed here.

the fuselage looks a trifle narrow just forward of the fin; this may be somewhat accentuated by the large fairings on the tailplane support struts, and is certainly not enough to detract from the finished model. The simulated fabric covering on the flying surfaces is akin to the curate's egg, good in places, that on the rudder being a little coarse when compared with the tailplanes and wings. There are many areas which can be improved by careful work such as

plete the scene. The castings of the parts are extremely well detailed with just a little fine flash, easily cleaned off, on some parts. As with all cast metal kits a little fine filing may be necessary to obtain a perfect fit and patience will be rewarded in careful assembly. Not a job to be rushed, the parts are bonded together with a 5-minute epoxy adhesive following the assembly instructions in the kit.

Colour of these engines was usually black with sometimes red wheel spokes and inside rims but do not aim for a super glossy finish — they are working engines and slightly glazed matt looks best. One of the beauties of metal kits is that the natural colour for any unpainted parts can be realistically obtained by just buffing up the parts. Dull earth colour between the strakes on the wheels and on the wire rope round the winding drum will enhance the natural effect and of course study of these actual types at shows and rallies is to be recommended.

The range of models from W & T includes

Continued on page 626

Completed model of the Airframe Westland-Hill Pterodactyl V in 1:72 scale.



MODELTOYS

PLASTIC KIT SPECIALISTS — ASSOCIATE MEMBER I.P.M.S.

RAREPLANES VACFORMS A/C		HASEGAWA A/C KITS		TAMIYA A/C KITS		MODELDECAL DECALS	
B-21H Fuselage	1/72 60p	Lockheed T-33A	1/72 65p	J7W1 Shinden canard	1/72 70p	All listed sets available:	1/72 SCALE
F-48B-3, C.P.1 Fuselages	1/72 60p	Curtiss SO C-3 Seagull	1/72 65p	Ki-44 Shoki (Tojo)	1/72 70p	3. N.A. F-100D Super Sabre (four alternatives in USAF service).	
F-86H Fuselage	1/72 60p	N.A. F-86F Sabre	1/72 65p	A6M2-N Rule	1/48 22.20	6. U.S. Navy, F4U-1A Corsair, VF-17, SB2C-3 Helldiver, OS2U-3 Kingfisher.	
S. Snipe	1/72 1.25	Heinkel HE-51 A-1	1/72 65p	B. Buffalo	1/48 22.20	10. USAF-S.E. Asia RF-101C, F-105D, A-1H and EC-47N	
Thomas Morse S-4C	1/72 1.25	F-54 Freedom Fighter	1/72 65p	Lancaster I/III	1/48 22.20	19. Thunderstruck, Jabo 33; RF-84F Thunderflash, AG51; Sea King Mk. 41.	
Bell 206 Jetranger	1/72 1.25	T38A (F-58) Talon	1/72 65p			21. A-4E Skyhawks VMA-311 VA-9A, A-4F Skyhawk, VA-164, Skyraider, VA-65.	
Stinson Sentinel	1/72 1.25	S. Spitfire Mk. I	1/72 65p	Polkarpov 1-153	1/72 80p	22. A-7D Corsairs, 356 TFS, 354 TFW, 49 TFS, 355 TFW, with alternative decals for 357 TFS, 355 TFW, T-33A, 50 TFW, and F-86A Sabre, 116 FIS.	
S. Spitfire	1/72 1.25	P-51D Mustang	1/72 65p	Ki-44 Shoki (Tojo)	1/72 80p	23. Phantom F.G.1, 43 Sqn. Harrier G.R.1A, 3 Sqn. Lightning F.2A, 92 Sqn. All RAF.	
Rep. P43A Lancer	1/72 1.25	Ki-44 Shoki (Tojo)	1/72 65p	ME 262B-1a/U1	1/72 80p	24. RAF Hunter F.6, 79 Sqn. Phantom F.G.R.2 41 Sqn. Sea Venom F.A.W. 21 809 Sqn. Sea Venom F.A.W. 21 890 Sqn. F.A.A. Wyvern S.4, 831 Sqn. F.A.A.	
Heinkel HE-112-0	1/72 1.25	Ki-61 Hien (Tony)	1/72 65p	FW 190A-8/3	1/72 80p	25. Lightning F.2A, 19 Sqn. Canberra B.118 16 Sqn., Havard T.28, 500 Sqn. Hunter FGA.9, 45 Sqn. All RAF.	
Ryan ST/PT Trainers	1/72 1.25	FW 190A-5/7	1/72 65p	P-47 Thunderbolt	1/72 80p	26. Buccaneer S2B, 15 Sqn. Hunter FGA.9, 58 Sqn., Canberra B.2 10 Sqn., Gazelle C.F.S. All RAF-R.N. Gazelle HT2.	
Serverskey P-35	1/72 1.25	FW 190D-9	1/72 65p	Block 152	1/72 80p	27. Canberra T4, 231 OCU, RAF, Cottesmore 1974, Hunter T8, 47FS, RAF, 1973 (or 56 Sqn. 1962). Phantom FGR.2, 111 Sqn. RAF, Coningsby, 1974. Buccaneer S2A, 208 Sqn. RAF Honington, 1974.	
Curtiss-Wright Demon	1/72 1.25	ME BF 109E-4/7	1/72 65p	Dewoitine D-520	1/72 80p	28. Canberra E15, 98 Sqn. Phantom F.G.R.2 41 Sqn. Sea Venom F.A.W. 21 809 Sqn. Sea Venom F.A.W. 21 890 Sqn. F.A.A. Wyvern S.4, 831 Sqn. F.A.A.	
Breda BA-65	1/72 1.25	ME109G	1/72 65p	Caudron 714	1/72 80p	29. BAC-SEP Jaguar GR1, 14 Sqn. RAF, 1975. BAC-SEP Jaguar T.2, 14 Sqn. RAF, 1975. Rep. F-84F Thunderstreak, 314 Sqn. Dutch A/F. Rep. RF-84F Thunderflash, 717 Sqn. Norwegian A/F. L. C-130H, Hercules, 721 Sqn. Danish A/F, 1975.	
Grumman F3F-1/2	1/72 1.25	P-40E/Kittyhawk IA	1/72 65p	Les Mureaux 117	1/72 80p	30. G. US-2N Tracker, 320 Sqn. Dutch Naval A/S. G. Javelin FAW 8. Can be finished for either 41 Sqn. RAF or 85 Sqn. RAF, 1963. BAC-SEP Jaguar GR1, 17 Sqn. RAF, 1975. BAC-SEP Jaguar T.2, 17 Sqn. RAF, 1975. Phantom FGR.2, 29 Sqn. RAF, 1975.	
N.A. F-86D Sabre	1/72 1.50	P-40N Warhawk	1/72 65p	Morane MS 225	1/72 80p	31. H. Fury I, K5673, 1 Sqn. RAF, Tangmere, 1937. B. Bulldog IIA, K2151, 23 Sqn. RAF Kenley, 1932. G. Gladiator I, K8027, 87 Sqn. RAF, Debden, 1938. A.W. Siskin IIIA, J8959, 43 Sqn. RAF, Tangmere, 1930.	
Lockheed Vega	1/72 1.50	P-47D Razorback	1/72 65p	Morane MS 406	1/72 80p	32. H.S. Sea Vixen FAW.2, XP923, 766 Sqn. FAA, May 1968, or 890 Sqn. FAA, Sept. 1968. Additional emblems and part serials included also for machines of 892, 893, 899 Sqn., and R.N.A.Y. Sydneyham, Super Mystere B2, E.C.212 L'Armee de l'Air, 1971. F-100D Super Sabre, 727 Sqn. R. Danish A/F, 1973. Sepeal Jaguar A or E, 7 Esc. L'Armee de l'Air, 74-75.	
SB2U Vindicator	1/72 1.50	P-47D Bubbletop	1/72 65p	Morane MS 230	1/72 80p	33. British a/c post-war serial letters (black), 16 in, 18 in, 20 in and 24 in heights. Examples of types using these sizes: Sabre, Jaguar, Hunter, Lightning, Vampire.	
Curtiss A-8 Shrike	1/72 1.50	Cessna A-37A	1/72 65p	Albu	1/72 80p	34. British a/c post-war serial letters (black), 30 in, 36 in, 48 in heights. Examples of types using these sizes: Gannet, Mosquito, Phantom, Canberra.	
N.A. 17 Nomad	1/72 1.50	G-0V-10A Bronco	1/72 70p	H. Hurricane Iic	1/72 80p	35. British a/c post-war serial numerals (black). To be used with Sets 33 and 34.	
B.P. 59 Aracomel	1/72 1.50	FuJI T-1A Trainer	1/72 70p	Dewoitine D.500/501	1/72 85p	36. British a/c post-war fuselage serial letters and numerals (black), 8 in height. Variations in design included to cover various styles. Also includes a few 4 in "Royal Navy", plus 8 in and 12 in ditto, and "Royal Air Force".	
SBC-3/4 Helldiver	1/72 1.50	Heinkel HE 51 B-2	1/72 80p	P.W. Stösser	1/72 85p	37. Phantom FGR.2, 56 Sqn. RAF, 1976, with optional markings for 2 Sqn. RAF, 1971. Sabre FI, 20 Sqn. 2nd TAF RAF, 1955. Mirage 111E, E.C.214, L'Armee de l'Air 1976, CM170 Magister, L'Armee de l'Air, with optional markings included. F-111E, 20th. TFW. USAF Upper Heyford, 1976, as at Greenham Common display.	
Curtiss A-12 Shrike	1/72 1.50	C. Seagull floatplane	1/72 80p	F.39 O'Connor	1/72 80p	38. Provost T1, 1FTS, XF559 as Sept. '59 and April '60. F-84F Thunderstreak, 2nd F. wing, Belgian A/F, 1956. Mirage MF.5, C.3/13, L'Armee de l'Air 1973. S.A. Bulldog T1, London UAS and 2FTS RAF 1974. Vampire FB.9 8 Sqn. RAF, Jaguar GR1, 2 Sqn. RAF, 1976.	
D.O.-43 Observations	1/72 1.50	Bell OH-1D Iroquois	1/72 80p	P.N. Wm Aircobra	1/72 80p	39. WW2 British roundels and fin flashes, types A and A1. Type A diameters: 25, 30, 35, 40, 42, 45 inches. Type A1 diameters: 20, 28, 30, 34, 35, 42, 45.5 inches. Fin flash widths: 15, 18, 21 inches.	
Fairley Fulmar I/II	1/72 1.50	MIG-17E/D 'Fresco'	1/72 80p	FI-156K3 Storch	1/72 80p	40. WW2 British roundels and fin flashes, types A, A1, C and C1. Type A diameters: 45, 50 inches. Type A1 diameters: 49, 56 inches. Type C diameters: 40, 63 inches. Type C1 diameters: 54 inches. Type A fin flash widths: 9, 12, 24, 27, 36 inches. Type C width: 54 inches.	
R.F.-84G Thunderjet	1/72 1.50	AM3M Mod. 32 Zero	1/72 80p	F4U-108 Corsair	1/72 80p	41. WW2 British roundels and fin flashes, types C and C1. Type C diameters: 16, 32, 48, 50, 54, 56 inches. Type C1 diameters: 18, 36 inches. Fin flash widths: 12, 24, 36 inches.	
A.F.-1 Fury	1/72 1.50	AM2 Zero	1/72 80p	Mc B1109S-C	1/72 85p	42. WW2 British roundels, type B. Diameters: 15, 25, 30, 32, 35, 40, 44, 48, 49, 50, 54, 56, 59, 63, 66.5 inches.	
S. Seafire F-47	1/72 1.50	BAC Lightning 6	1/72 90p	S. Spitfire Vb	1/72 85p	43. F-4EJ Phantom, 302 Sqn. Jap. ASDF plus emblems and serials for 301 Sqn alternative Jaguar GR1, 41 Sqn. RAF, 1977. Jaguar GR1, 20 Sqn. RAF, 1977. F/TF/RF-104G Starfighter, Dutch Air Force, choice from either 306 Sqn, 311 Sqn, 312 Sqn, VbV/L, or "Dutch Masters". F-84F Thunderstreak, E.C.1/9, L'Armee de l'Air, 1961.	
R.P. 47N Thunderbolt	1/72 1.50	T-34A Mentor	1/72 90p	ME 163 Komet	1/72 85p	44. F-104/JJ Starfighter, Jap. ASDF, choice from either 202'3'4'5'6 Sqn., Phantom FG 1, 892 Sqn. FAA, 1977, either XV567 "002" or XV568 "003" can be modelled, both with "Silver Jubilee" markings. W. Lynx, Dutch Naval Air Service, 1977. AD4-N Skyraider, choice from Esc.1/20, Esc.1/21, Esc.2/20, L'Armee de l'Air.	
B.C. 45 Expeditor	1/72 1.80	G.OV-1A Mohawk	1/72 90p	Arado Ar96	1/72 85p	Sets 39-42 give a comprehensive selection of standard styles and sizes of national markings as carried by British military aircraft of small to medium size during the 1938-47 period. Total content is 310 roundels and 60 inches (app.) of assorted widths flashing.	
Martin B-10	1/72 1.80	L.F.-104G Starfighter	1/72 90p	PZL P-11C	1/72 85p	'MODELDECAL' style fully illustrated instruction sheet, giving decal locations and full-colour scheme details, is included with all Modeldecals (except sets Nos. 33-36, 39-42 incl) and commencing with set No. 19, a selection of photographs is also included (excl 33-36, 39-42).	
D.H. Rapide (Domine)	1/72 1.80	Aichi E 13A 'Jake'	1/72 1.00	SAAB J29	1/72 85p	PRICES: Sets 3, 6, 10 52p each. Sets 19 to 22 60p each. Sets 23 to 32 70p each. Sets 33 to 36 35p each. Sets 37, 38 75p each. Sets 39 to 42 58p each. Sets 43, 44 75p each.	
Fokker G1 Reaper	1/72 2.00	H.S. Harrier Mk. I	1/72 1.00	Potez 631	1/72 85p	Postage on all decals: UK Rates: Up to 2 sets 17p, 3 and over 20p. Overseas (surface): Up to 3 sets 25p, up to 10 sets 50p, up to 20 sets 97p. Please make cheques and P.O.'s payable to MODELTOYS.	
L. Ventura	1/72 2.50	A4E/F Skyhawk	1/72 1.00	Potez 63-II	1/72 85p	OVERSEAS TRADERS. These decals are already stocked by traders in many countries, immediate supplies with full terms. Details on request	
Super Constellation incl. extra	1/72 4.50	Type 94-1 'Ali'	1/72 1.00	Brequet 693	1/72 85p		
Parts for EC-121D and WV-2	1/72 4.50	Mitsubishi MU-2S	1/72 1.00	Lure 45	1/72 85p		
Douglas DC4/C54	1/72 4.50	Mitsubishi MU-2J	1/72 1.00	Jaguar A/C	1/72 85p		
YB-17 F. Fortress with extra fuselage for B-17D	1/72 4.50	G.D. F-16A	1/72 1.00	Lea 451	1/72 85p		
		R.J. 105D Thunderchief	1/72 1.00	Block 174	1/72 85p		
		RF-37 Viggen	1/72 1.00	J357/SK37/SF37	1/72 85p		
		A-7A Corsair II	1/72 1.00	AJ37/RF35/TF35 Draken	1/72 85p		
		F-100 D Super Sabre	1/72 1.25	F8E/F Phantom	1/72 85p		
		F-15 Eagle	1/72 1.25	RF-104G Starfighter	1/72 85p		
		RF 101C Voodoo	1/72 1.25				
		Ki-15-1 Babs	1/72 1.30				
		P-38F/J/L Lightning	1/72 1.35				
		F-106 Delta Dart	1/72 1.35				
		F-102A Delta Dagger	1/72 1.35				
		BSN2 Kate	1/72 1.50				
		Ki-27A/B Nate	1/72 1.50				
		Me 109E-3	1/72 1.50				
		AM5C Zero	1/72 1.50				
		AM3M model 22 Zero	1/72 1.50				
		M.J2M3 Raiden	1/72 1.50				
		K.N1K2 J George	1/72 1.50				
		RA-5C Vigilante	1/72 1.50				
		G.A. 6A Intruder	1/72 1.50				
		S2F-1 (S-2A) Tracker	1/72 1.50				
		F-4E Phantom	1/72 1.50				
		MIG-25 Foxbat	1/72 1.50				
		M.G5M1 Betty	1/72 1.95				
		G. F-14A Tomcat	1/72 2.25				
		B-17G Fortress	1/72 2.50				
		B-17F Fortress	1/72 2.50				
		L.P2V7 Neptune	1/72 3.45				
		N.G8N1 Rita	1/72 3.85				
		K.HKX5 Emily	1/72 5.75				
		B-47E Stratojet	1/72 5.95				
		Shinniewa PS-I	1/72 6.60				
		ME. 163 Komet	1/72 1.75				
		P-26A Peashooter	1/72 1.95				
		ME. BF-109E	1/72 2.50				
		F.W. 190A	1/72 2.50				
		P-51 Mustang	1/72 2.50				
		V.S. Spitfire VB	1/72 2.95				
		Mc. D/D A4E/F Skyhawk	1/72 3.45				
		L.F104 G/J	1/72 3.45				
				</			



Above left The Jim Varney Transport Replicas craftsman-made London Transport STL photographed against a backdrop which some of our readers might find familiar? Above right From the same company also comes the Scammell illustrated here both assembled and in its component parts.

a steam road roller with living van and water trailer at £5.99, a portable steam engine at £2.49 and a horse and four-wheel coal merchant's dray at £1.78 in addition to the ploughing engines which cost £9.49 (or £4.86 individually). All kits come well packed in a strong box and each will provide many hours of modelling enjoyment. They may be ordered from W & T at 222 Warwick Road, Birmingham.

Forma Plane Bobcat/Crane

THE ATTRACTIVE Cessna Bobcat is the subject chosen for Forma Plane's latest 1:72 scale release and it follows the same format as those already existing in the range. The stout cardboard box contains one sheet of thick white plastic card, one canopy moulding, a strip of micro rod and instructions which include exploded construction views.

Forma Plane have thoughtfully included both the Lycoming and Jacob engines so the modeller has a choice of constructing either the AT/8 or AT/17, both of which were used for training purposes in the USAAF and were roughly equivalent to the Oxford.

Construction of the moulded parts is straightforward but surface detail is a little

Morris & Ingram (London) Ltd, of 156 Stanley Green Road, Poole, Dorset, have just introduced a new compressor suitable for use with all types of airbrush. This quiet-running machine delivers one cubic foot of air per minute at 25 psi and will meet the needs of many modellers as well as professional artists for whom space is at a premium. The basic compressor costs £55 but accessories such as a moisture trap and regulator are an extra £16.



crude as is often the case with this maker's offerings.

Spare parts from suitable kits will be needed for the propellers, engines and wheels for, although these are included, as is full cockpit detail, they are not very convincing.

This is a middle of the road vac-form kit which will probably only end up completed to a high standard in a very low percentage of kits sold.

Replica cars

JIM VARNEY's Transport Replicas range of 4 mm: 1 foot bus and coach kits must by now be very well known among railway modelers and bus enthusiasts. This range has recently been extended with a complementary series of car kits which include the 1938 Austin Goodwood, 1936 Morris 8 Tourer, 1937 Wolseley Wasp, 1934 BSA Sports Coupé, 1935 Riley Falcon, 1936 Rolls Royce Phantom III, 1936 Morris 8, 1937 Austin 16 and a 1935 Ford Model Y.

At first glance the price, £4 per kit, to those accustomed to plastic models, may seem a little high but not so if the quality of the white metal castings of the six kits we have examined is typical. The exploded sketch and construction hints make assembly clear but we must stress that fit of parts must be carefully checked at each stage. Gentle bending can put right any distortion caused in transit and fine files or emery paper can ease any tight fits.

The individual parts are very finely cast and basically only cleaning with a wire suede brush is all that is necessary. Sparing application of 5-minute epoxy adhesive is all that is required but do not hurry assembly, two or three parts at a time are plenty. With care and patience fine little replicas of these cars of the pre-war era can be created as models in their own right or as accessories to enhance a model railway layout.

Also loaned by Transport Replicas were some samples of their craftsman-made kits. All hand-sprayed and lined out to an extremely high standard, the prices of these collectors' items are approximately £27 for buses, £16.20 for lorries and vans and £12.96 for the cars. If you have made any of these kits you will realise the fantastic amount of work involved in producing these models and the price is therefore not exceptional. Prices of bus kits, unmade, range from £8.10 to £9.45 with the charming Scammell Van priced at £5.95. Full

details from Transport Replicas Ltd, 4 Goudhurst Road, Downham, Bromley, Kent, if you forward a SAE.

Heller F-84G

FIRST GENERATION post-war jets have in recent years been somewhat neglected by kit manufacturers. Recent releases from Airfix and announcements at various trade fairs seems to indicate that the balance may soon be redressed. Heller have started to give the ball momentum with the release of two jets which are sure to be popular, probably for different reasons.

The first is the F-84 Thunderjet, a contemporary of the Meteor IV, F-80 and F-86, and the last subsonic straight-winged fighter to be used by the USAF. Heller have chosen the G version which was produced in greater numbers than any other and was primarily a tactical support fighter bomber and was capable of delivering a nuclear device.

As one has come to expect from Heller, quality is uppermost in their mouldings and accuracy, and it is certain that this kit will be very popular among those who for a long time have wanted a F-84 and have perhaps battled with the very old Frog kit if they could find one.

All components fit very well and the intake duct buried in the front of the fuselage is very impressive and overcomes that 'straight-through-look' which used to be characteristic of this type of aircraft.

Cockpit detail is excellent and there is plenty of scope for the detail fanatic whose work will not be wasted as the canopy has the windscreen moulded separately, enabling it to be fitted in the open position. A pair of inboard wing-mounted fuel tanks as well as the wingtip tanks are provided, and small details such as landing lights, different panelled air brakes, detailing under the rear canopy, etc, have not been overlooked.

Markings are for aircraft of the French or Norwegian Air Forces and they are an improvement on Heller's usual decals.

MODEL MARK

The proprietor wishes to apologise to all his valued customers for the inconvenience they have suffered during the past few months, and wishes to assure all concerned that outstanding orders are now receiving urgent attention.



Aviation

Aviation Photo Album, compiled and edited by Michael J. F. Bowyer. Patrick Stephens Limited, Bar Hill, Cambridge, CB3 8EL. Price £1.95.

READERS OF this magazine will undoubtedly be familiar with our occasional 'Photopage' feature. In a sense this new book represents the 'pick of Photopage' but with the essential difference that not one of the photos in it has ever been published before. It contains a careful selection, from the hundreds of photos sent in by readers of this magazine over the last ten years, of the best and most interesting shots, and will thus be of immense interest to all aircraft modellers and enthusiasts in general.

Most of the photographs — there are nearly 200 in all — are completely unique, having been taken (often against regulations) by people on the spot, and span some 60 years of aviation history. There are World War 1 biplanes, colourful machines of the inter-war period, a huge selection of World War 2 subjects and a concluding section on the post-war era. The reproduction quality is excellent and the editor's informative captions give such details as type, unit and location as well as precise date in many cases. A book to browse through and a source of many interesting modelling ideas. Great!

Messerschmitt Bf 109 At War, by Armand van Ishoven. Ian Allan Limited, Terminal House, Shepperton, Surrey. Price £5.95.

MANY would argue that more than enough has been written about the Messerschmitt Bf 109. So why another book? It is, of course, a natural candidate for the 'At War' series; indeed the series would really be incomplete without a volume on this remarkable German fighter. Unlike the previous 'At War' books, the author has chosen (rightly in my opinion) to rely almost exclusively on the personal reminiscences of pilots who flew the 109. Armand van Ishoven is a well-respected aviation historian, and he has deliberately angled his book away from the dramatic (and very familiar) stories of the Battle of Britain and

BOOKS FOR MODELLERS

suchlike, and concentrated more on what it was really like to fly a 109 both in peacetime and in combat.

He outlines the aircraft's good points — its high top speed, its excellent rate of climb, its performance under negative 'g', its good control qualities at low speeds — and then lists its drawbacks — ailerons and elevators far too heavy at high speeds, the disastrous undercarriage, the cramped cockpit.

The book begins by explaining how the 109 evolved (and it was by no means plain sailing to begin with) and how it developed into a major combat aircraft, showing its teeth in the Spanish Civil War, and reaching its zenith in World War 2. Like all the books in this series, it stands and falls on its illustrations, and here van Ishoven scores highly. The photographs are first class, and dovetail neatly with the text. Modellers will welcome the sections on Bf 109s in Swiss and Hungarian service, especially as they include some good, crisp close-up photographs (A Swiss 109 complete with white crosses and neutral stripes would make a dramatic and original model). There is also an interesting chapter on the rather neglected subject of the maintenance and servicing of the 109.

However I do have one or two criticisms of the book. The pot-pourri approach does make it rather disjointed and the short chapters tend to exaggerate this. The result is a book that jumps around a bit and lacks sufficient coherence. Also, a couple of pages of good cutaway drawings of the complete aircraft and cockpit layout would not have gone amiss. Nevertheless I enjoyed the book and would recommend it to any Luftwaffe enthusiast. It successfully dispels the 'oh-no-not-another-book-on-the-109' syndrome that seems so prevalent these days.

Aircraft Carriers and their Aircraft, by A. Watts. Ward Lock Ltd, 116 Baker Street, London W1M 2BB. Price £2.50.

IT IS HARD to know the exact purpose of this nicely produced book. The author has tried within obvious limits to provide details of aircraft carriers and their aircraft but has not really succeeded in producing anything new or outstanding. Over 100 photographs have been included but as far as the aeronautical content is concerned the majority of these have been seen over and over again, those more experienced on ships than your reviewer might well be able to say the same about the carrier pics.

It is obviously difficult to produce a serious work in this size and it is sufficient to quote one example which underlines the whole feel of the book, this is, that on page 74 the Seafire is condensed to one page, half of which is a photograph of the prototype F 45 and the rest a table of dimensions of an undefined mark.

Perhaps the kindest comment is that the

book might well encourage youngsters to look deeper into other sources and I suppose one could say that maybe this is the publisher's sole aim; it is difficult to see any other.

De Havilland Aircraft since 1909, by A. J. Jackson. Putnam and Co Ltd, 9 Bow Street, London WC2E 7AL. Price £12.50.

IT WOULD be difficult to find a better combination concerning itself with aeroplanes than de Havilland and A. J. Jackson. Both have known the greatest years of British civil aviation, and surely de Havilland means civil aeroplanes. True, the Tiger did a great job in the RAF, and the jet fighters and the Chipmunk. But it was only with deep sorrow that Sir Geoffrey and his great team, possibly the greatest in British aviation, turned their attention to war machines.

The book covers in detail all the designs that the company proceeded with and details many of the projects. The people who made them possible are there, the places where de Havilland produced the great aeroplanes, and the notes about the aircraft are copious. In 541 pages the story is told and despite the welter of detail and data this remains a readable book.

One might be sorry that an effort was not made in this revised edition of the volume to update and correct some of the detail about the Mosquito, for of all de Havilland aeroplanes right to the end of the company this was without doubt the aeroplane most revered. The Mosquito was more of a great new concept than any of the others.

The impressive Comet racer is well written up, and the jet Comet too, an aeroplane that somehow has come to be rather overlooked despite its great claim to fame. Maybe it's still too soon to fully evaluate its contribution to the history of passenger transport. The loss of the Comets and young Geoffrey had a profound effect upon the company and things were never the same after these tragedies. But they do not diminish the flair for design and superb form that was the hall-mark of everything from 'DH'. If you like aeroplanes then you should have a copy of this record of great personal enterprise, a feature that has all but vanished from British endeavour.

Jane's Pocket Book 13: Robot Aircraft Today, by John W. R. Taylor and Kenneth Munson. Macdonald and Jane's, Paulton House, 8 Shepherd's Walk, London N1 7LW. Price £2.95.

FOLLOWING THE usual format of this Jane's series with a choice of PVC limp or hard-back covers, No 13 sets out to detail in its 234 pages, many of the remotely piloted vehicles (RPVs) or robot aircraft which are in operation today.

Authors John Taylor and Kenneth Munson need no introduction and it is sufficient to say they have tackled their subject well

and have overcome the ever-present danger in this type of book of becoming too technical. Photographs are, in the main, very good but some tend to be a little grey. A useful index occupies the last four pages and saves a lot of frustration in locating specific entries. Maybe at £2.95 modellers will lean towards their local library but those whose interests stretch beyond the modelling bench will consider it a good investment.

Jane's Pocket Book 14: Home-Built Aircraft, by Michael Taylor. Macdonald and Jane's, Paulton House, 8 Shepherdess Walk, London N1 7LW. Price £2.75.

THERE ARE many aviation enthusiasts around the world who spend a lot of time and money trying to recapture the halcyon days of flying when open cockpits, navigation by following railway tracks, and unreliable piston engines, were all part of the magic of aviation. The latest offering from Jane's pays tribute to such people by comprehensively covering in 255 pages home-built aircraft from Japan to the USA and France to Poland. It is probably true to state that none of the aircraft detailed will ever feature in plastic kits, but to those modellers who like a challenge there is enough material to whet the appetite for scratch building. In the space available to him author Michael Taylor has ably described the aircraft which have emerged from back gardens, garages and workshops, and one cannot help but admire the dedication of the designers and builders, in many cases one and the same person.

Military

By Air To Battle: A reprint of the original Official Account of the British First and Sixth Airborne Divisions. Patrick Stephens Limited, Bar Hill, Cambridge, CB3 8EL. Price £4.50.

THERE HAVE been so many recent books dealing with the Arnhem epic that it is refreshing to see a new book on airborne operations with a broader outlook... although in a sense it is not 'new' because it is a reprint of a volume first published by HMSO in 1945. It begins with Churchill's instruction of June 1940 which led to the formation of England's first parachute training establishment, and then follows the fortunes of the airborne divisions through the entire war — from the inauspicious beginnings at Monte Vulture, through the small but vitally significant Bruneval raid, operations in Tunisia, Sicily and Italy, to D-Day and after. Arnhem rates a fair amount of space but is only part of the overall book, which includes details of weapons, uniforms, equipment and training.

Although this book is an 'official' record, it is no dry, clerical tome but a well-written, lively and evocative narrative which succeeds brilliantly in capturing the flavour of the era and makes a good 'read'. It is also, of course, a valuable reference work and contains a great deal of verbatim spoken material. Its relevance to modellers is limited — there are no illustrations other than a few maps and a full-colour jacket painting from Gerry Embleton — but it should have definite appeal to anyone interested in the war, whether they lived through it or not, and will be of undoubted value to wargamers as a companion to Don

Featherstone's recent book *Wargaming Airborne Operations* reviewed last month.

Osprey 'Men-at-Arms' series: **The Spanish Civil War 1936-39**, by Patrick Turnbull with colour plates by Jeffrey Burn; **Napoleon's Hussars**, by Emir Bukhari with colour plates by Angus McBride; **The Grenadier Guards**, by General Sir David Fraser with additional research by R. J. Marrion and D. S. V. Fosten, colour plates by Angus McBride and a foreword by HRH The Duke of Edinburgh; and **The British Army 1965-80**, by Major D. G. Smith with colour plates by Angus McBride. Osprey Publishing Ltd, 12-14 Long Acre, London WC2E 9LP. Price £2.25 each.

THE LATEST four 'Men-at-Arms' titles are among the most interesting which Osprey have yet produced, and all cover long overdue subjects. The title on the Spanish Civil War, a campaign which is slowly but surely gaining modelling and wargaming adherents, is particularly welcome since so little has previously appeared in English on the uniforms and equipment of the opposing Nationalist and Republican forces. Napoleon's hussars is a logical title in Osprey's ongoing series devoted to French cavalry types, and one of the most colourful of the lot. The Grenadier Guards relates the history of one of England's premier fighting regiments from its origins to the present day, and will undoubtedly be avidly sought by past and present members of the regiment as well as all interested in the British Army in general. Similarly with Major Smith's title on the modern army.

The authors are all highly respected in their own fields and have a reputation for accuracy, but a large degree of credit must also go to series editor Martin Windrow, whose deft touch is particularly apparent in the Spanish Civil War title and whose unique knowledge of military affairs helps make this series the success it richly deserves.

The colour plates in three of these latest books are by Angus McBride, who will need no introduction. The style is clean and detailed, even though most of his figures



seem to suffer from the same rather portly build. Jeffrey Burn is a very promising newcomer with an individual style which deserves encouragement.

All-in-all a good batch of books, reasonably priced as ever.

En passant, we owe an apology to Osprey, for their previous four titles somehow seem to have slipped through our review net and have not received prior mention. To put the record straight, they are: *The US Army 1941-45*, by Philip Katcher with colour plates by C. L. Doughty; *The Boer War*, by Christopher Wilkinson-Latham with colour plates by Michael Roffe; *North-West Frontier 1837-1947*, also by Christopher Wilkinson-Latham but with colour plates by Angus McBride; and *Montgomery's Desert Army*, by John Wilkinson-Latham and with the usual indomitable colour plates from Gerry Embleton.

After the Battle No 19: Guide to Hitler's Headquarters. Battle of Britain Prints International Ltd, 3 New Plaistow Road, Stratford, London E15 3JA. Price 75 pence.

THE LATEST edition of *After the Battle* is entirely devoted to Hitler's headquarters, and includes sections on the Führersonderzug (his train), FHQu 'Felsenest', 'Wolfschlucht', 'Tanneburg', 'Frülingssturm', 'Wolfsschanze', the assassination attempt in July 1944, 'Wolfsschlucht 2' and 'Adlerhorst'.

There are as usual a large collection of 'then and now' pictures (always the strongpoint of *After the Battle*), but unfortunately as so little remains of the Führer's headquarters today the modern photographs are not all that illuminating. However, this does not detract in any way from the overall value of this special issue. The bulk of the text is written by Dr R. Raiber, and he certainly knows his stuff. He makes some particularly interesting comments on the Hitler assassination attempt, and concludes that it was the size of the bomb that was at fault, rather than the so-called flimsy nature of the building (the walls were, in fact, 50 cm thick!) or that the bomb was designed purely for a bunker and not a conventional building.

The text is much enhanced by the use of some very good maps, which help to explain the often complicated layout of the Führer's headquarters. The author does reveal one very interesting fact at the end. How many *Airfix Magazine* readers know that one of the carriages from Hitler's train is still being used by the President of the Federal Republic of Germany?

Panzer Grenadiers, by James Lucas and Matthew Cooper. Macdonald and Jane's, Paulton House, 8 Shepherdess Walk, London N1 7LW. Price £5.50.

DESPITE A promising title and highly respected authors, this book comes as something of a disappointment. Following a short introductory section by Matthew Cooper on the development of the Panzer Grenadier concept, organisation, weapons, vehicles and equipment, the bulk of the text is devoted to four individual operations, three of them by SS units, which are little more than straight translations of extracts from German histories.

The operations covered are 2nd SS Division 'Das Reich' during Operation Taifun in 1941; 12th SS Division 'Hitler Jugend' in



Normandy in 1944; the 16th SS Training and Replacement Battalion at Arnhem; and the Panzer Grenadier Division 'Brandenburg' in defence along the River Neisse in April 1945. Apart from the first of these, there seems to be little reason for the selection of the extracts other than ready availability, since they do not really illustrate Panzer Grenadier, as opposed to ordinary unmotorised infantry, methods and tactics. The extracts are interesting in themselves, although the translation shows through, but in a book with this title I would have liked to have seen more attention devoted to Panzer Grenadier operations in general.

A final chapter rather euphemistically entitled 'unit histories' gives brief, three or four line, entries on all German motorised infantry and Panzer divisions which whet but do not satisfy the appetite. The book does not suffer as much from Macdonald and Jane's traditionally poor proof-reading as some other recent titles, and includes some interesting photographs although these do suffer from inadequate captioning. All in all, not one we can really recommend except to dedicated Panzer Grenadier enthusiasts.

British Military Museums and events. English Tourist Board, 4 Grosvenor Gardens, London SW1W 0DU. Price 30p (40p by post).

ALTHOUGH THIS booklet, published last summer and subtitled 'in the Silver Jubilee Year', specifically covers the pageantry of 1977, it is also a useful permanent guide for anyone interested in military affairs. It lists, with addresses, opening hours and a brief description of contents, all the regimental and service museums plus 'special' museums of interest such as the Shuttleworth and Warnham museums and HMS Belfast. Packed with information, it is an invaluable travelling companion whether you are on holiday or business, and well worth a 40p Postal Order.

Allied Combat Tanks, by Peter Chamberlain and John Milsom. Macdonald and Jane's World War 2 Fact Files, Paulton House, 8 Shepherdess Walk, London N1 7LW. Price £2.50.

COVERING the tanks of America, Britain, France, Poland and Russia, this largely pictorial book is a companion volume to the same publishers' *Axis Combat Tanks* and is produced to exactly the same large, mainly pictorial, format. All the main types are covered, although the descriptions are of necessity brief, and the book will be useful as an introduction to the subject or as a quick reference source. Unfortunately, despite a vast amount of wasted space (a fault common to all these WW2 Fact Files) the data tables are hopelessly incomplete. The photographs include a few good new ones but a rather high proportion of good old standard shots. Overall though a useful little book despite a binding error in our review copy which resulted in the last 16 of the book's 64 pages appearing at the front!

Wehrmacht Markings of World War 2 (2nd Edition), by W. J. K. Davies. Almark Publishing Co Ltd, 49 Malden Way, New Malden, Surrey KT3 6EA. Price £1.95.

THIS IS the second edition of a useful little reference work published several years ago and out of print for some time. It is now re-set in the 'new' and awkward Almark

size we have become accustomed to in recent months with 90 per cent of the old text remaining, rearranged in a more logical manner and with almost entirely different photos.

At £1.95 this would appear to be a good buy and to fit in well with the Ken Jones work on German desert markings and camouflage (even though this has the wrong order of battle for the period covered and hence wrong unit identifications) released earlier this year. Not so. In the process of reworking several bits of bad type have crept into the text, someone has forgotten to either re-number the illustrations from the original or to put figure numbers on the new drawings, thus making it very difficult to locate the exact item referred to without considerable flipping back and forth as the drawings do not occur near their text as in the first edition.

The crude drawings in the original have been greatly improved, and in some cases provided in colour. Nevertheless, tactical signs are scattered liberally throughout the text long before the section explaining them and a new reader will be puzzled until he can find the reference to them as there are no captions.

Divisional insignia are shown in colour but quite a few have some very strange backing colours not present on the real thing and could well lead the unwary or inexperienced modeller into some terrible blunders.

The plate on typical vehicle markings is based on oft repeated photos, many from Squadron/Signal publications, and are not necessarily accurately coloured or representative of German army vehicles as a whole. One plate shows what could well be a Panzer regimental badge of 7 Panzer Division without mentioning this fact. The German command flag and pennant system is shown by line drawings and a couple of colour plates minus a note that these could be in arm of service colouring, although this is covered in the original edition and the Ken Jones book!

Photographic coverage is not as varied as the first edition and on at least two occasions essential pieces of information are omitted despite being included in other books from the same firm. For example, on page 26 there is a photo of a StuG of 189 StuG Abteilung complete with a badge which it is impossible to recognise accurately enough to model and there is no line drawing anywhere else in the book to clarify this. On page 29 there is a photo of a Kettenkrad of 2 Fallschirmjäger Division with a description of the 'kite' symbol of the division without a single reference to the battalion commander's initial being used as a further identification. This is clearly summarised in *Wehrmacht Divisional Signs* originally published by the same firm so why wasn't the data included?

The special tactical marks used by the SS in the Kursk battle are shown without explanation of their use or reason for being and there is a caption to a photo of an SS Tiger clearly marked with the sign of 1 SS Panzer Korps LSSAH as a 'variation' of 1st LSSAH Divisional badge. The last page photo of an SdKfz 7/1 of 'Das Reich' is a worthwhile marking reference, but the caption should point out that the troops aboard it are American to avoid any confusion.



Air Battles in Miniature: A wargamers' guide to aerial combat 1939-1945, by Mike Spick. Patrick Stephens Limited, Bar Hill, Cambridge, CB3 8EL. Price £4.95.

WHEN WE WERE children, my brother and I used to simulate aerial dogfights using Airfix models on the ends of string 'control lines', whirled around our heads. Wargaming has come a long way since then, but so far the aerial side has been strangely neglected — largely, one suspects, through the difficulties in representing a third dimension without the use of clumsy tripod contraptions or layers of Perspex sheets. Readers of this magazine may remember that, a few months ago, the author of this new book explained his basic system in a series of articles which attracted a good deal of enthusiastic attention. Now he has gone 'the whole hog' and expanded his basic system into a complete book which covers virtually every aspect of World War 2 aerial combat.

He begins by explaining in simple terms the principles of flight, of combat aircraft design, and of aerial tactics, then goes on to show how these can be simulated in miniature using model aircraft and his own unique system of representing the third dimension (basically by ignoring the second!) Although it sounds odd when described, in fact this works remarkably well, as has been attested by at least one well-known fighter pilot.

The book covers all main forms of aerial combat, from simple fighter dogfights to multi-bomber raids and their interception, and includes sections on level and dive bombing, torpedo strikes, ground attack operations and even night fighting using a hex-grid 'radar' system. It also includes extensive aircraft data tables, information on combat probabilities and weapons effectiveness, and details for setting up one of two airborne campaigns — the Battle of Britain or Malta.

The book is well illustrated by clear diagrams explaining points in the playing rules as well as photographic sequences showing typical games in progress (using both 1:72 and 1:300 scale models) and could well open a new 'dimension' in wargaming circles.

Modelling

Aeromodeller Annual 1977/78, edited by Ron Moulton. MAP Ltd, PO Box 35, Bridge Street, Hemel Hempstead, Herts. Price £2.95.

EDITED BY Ron Moulton who will need no introduction to long-established followers of the hobby of aeromodelling, this annual is the usual pot-pourri of drawings, technical text and statistics, aimed at those modellers whose creations actually fly. The book has been well produced and is invaluable to those who build flying models but of little value to those whose hobby is purely plastic modelling.

Toyshop Steam, by Basil Harley. Model and Allied Press Ltd, PO Box 35, Hemel Hempstead, Herts HP1 1EE. Price £4.95.

IT IS DIFFICULT to see quite what the author had in mind with this book which is superficially about the development of the toy steam engine business in Britain. Still effective are, of course, the Mamod range and it is this simple oscillating cylinder type of steam engine that this book is all about. In 70-odd years about the only thing that appears to have progressed is the price as the toy steam engine of today differs but little from that of the turn of the century. Nevertheless an interesting book for the nostalgia market but of little benefit to the modeller or model engineer.

Model Engineering, by Martin Evans. Published by Pitman Publishing Co Ltd, 39 Parker Street, London WC2B 5PB. Price £6.50.

I SUPPOSE we have all been to the Model Engineering Exhibition and marvelled at the superb model steam locos, traction engines, clocks and boats, etc, on display or have seen and envied similar models in museums. This book by Martin Evans shows some of these superb works of art as examples but also sets out to briefly introduce the beginner to the various aspects of the hobby. It has chapters on setting up a workshop, hand tools, the lathe and its use, drilling and grinding machines, casting, materials and working drawings, etc. The basics are explained in an easily understood, not too technical language, which even this reviewer, a mere plastic kit maker, could follow. A superb book, with some marvellous photographs and line drawings, which should be on every modeller's shelves if only as a spur to greater efforts.

Better Military Modelling, by Donald Featherstone. Kaye & Ward Ltd, 21 New Street, London EC2M 4NT. Price £2.25.

THIS ATTRACTIVE and inexpensive book, well illustrated by numerous step-by-step photographs, is one of the best primers on figure modelling yet to appear. Sub-titled 'The key to a better collection', it covers building up, moulding and casting original figures; soldering and gluing; converting large and small scale plastic figures; painting; dioramas; display, and photographing your models. Many of the modellers illustrated working on specific projects are youngsters, just to prove you don't have to have years of experience to make a good model — just patience plus some basic knowledge, skill and tools. The finished results should provide inspiration for many a modeller who has thought 'I can't ever achieve anything like that' and the book is

to be highly recommended for its clear and lucid explanations.

Modelling Farm Wagons, by John Vince. Published by Shire Publications Ltd, Cromwell House, Church Street, Princes Risborough, Aylesbury, Buckinghamshire. Price £1.25.

AN INTERESTING little book which should serve as an introduction to the craft of wagon modelling in traditional materials of wood and metal, and just the book for those who want to progress from some of the rather crude 'kits' that abound in hobby shops. A lot of these are of doubtful accuracy and rarely seldom worth the effort and expense — far better to buy this book by John Vince and do the job properly. However there is just one point this reviewer did not like and that is the final construction of the wheels. To be strictly accurate the tyre of a dished wheel should be at right angles to the spokes and therefore of slight conical form, not as shown in the cross section diagrams. The axle stubs on the axletrees point downwards and the dish incorporated in the wheels is to ensure the spokes are vertical to the road surface thus transmitting the load in a straight line. It follows therefore that the rim and tyre must be at right angles to the spokes. This is shown on many of the illustrations of actual wagons in this book and indeed on some of the models. The author's list of plans, tools and materials, books and collections of full-size vehicles forms an interesting and useful appendix to this book.

Modelling Farm Carts, by John Vince. Published by Shire Publications Ltd, Cromwell House, Church Street, Princes Risborough, Aylesbury, Buckinghamshire. Price £1.25.

A COMPANION book to that reviewed above, this deals with farm carts, that is to say two-wheeled vehicles. Of similar format, this book, in fact, duplicates some of that written in the wagon book but is nevertheless well worth buying to broaden the spectrum of general farm vehicles. If you want to progress from the crude kits to proper tasteful scale models of farm carts and wagons then these could be the two books to set you on the road.

Cars

Classic Racing Cars, by Cyril Posthumus. The Hamlyn Publishing Group Ltd, Astronaut House, Hounslow Road, Feltham, Middlesex, TW14 9AR. Price £4.95.

BY HIS OWN definition, the author here counts as 'classic' those out-and-out racing cars devoid of mudguards, lights, a second (empty) seat and other trappings that feature on what are loosely termed 'sports-racing cars'. One can only hope that those who might disagree with his choice of the 40 cars profiled here will in due course be rewarded with a companion volume remedying some of the omissions.

Any book from this eminent author — a leading historian and a car model maker of no mean skill — is worthy of serious consideration, and this 160-page large-format volume is no exception. The informative text — which thoughtfully features a useful specification of each car, including leading dimensions — goes back to such pioneer 'classics' as the 1906 Grand Prix Renault and moves forward via the 1914 Mercedes

and 2-litre Grand Prix Sunbeam to the Alfa Romeo P2 and P3, the Type 35 Bugatti, the Mercedes-Benz W25, Auto Union D-type and Mercedes-Benz W163, to mention only a few.

The Maserati 250F, 2½-litre Vanwall, Ferrari Dino 246, 2½-litre Cooper-Climax, BRM 1½-litre V8, Flat-8 Porsche 804, Lotus 25, 49 and 72, 1½-litre V12 Honda, Indianapolis Lotus-Ford, 3-litre Repco-Brabham, Eagle-Weslake V12, BRM P160, 3-litre Tyrrell-Ford, Ferrari Flat-12 312T and McLaren-Ford M23 are just some of the other, more recent, models skilfully summarised and illustrated with monochrome and colour photos and drawings.

Though not itself a classic among motor racing books, and with the Hong Kong reproduction not quite out of the top drawer, this one still warrants ten out of ten for content and value.

The Encyclopaedia of the World's Classic Cars, by Graham Robson. Published by Salamander Books Ltd, Salamander House, 27 Old Gloucester Street, London WC1N 3AF. Price £5.95.

TO THOSE conditioned to encyclopaedias comprising multi-volume sets like *Britannica*, the modern vogue for single volumes so named is perhaps but another sign of publishers' determined efforts to do their best to counter the inevitable effects of inflation. This 248-page 12 × 8½ inch volume can, inevitably, only be something of a compromise, as its prolific but capable author is wise enough to admit in his foreword.

From AC to Wolseley, via HRG and Oldsmobile, 260 cars from 160 manufacturers are presented with a generous 100,000 words of accompanying technical and historic data that also includes dimensions of particular value to model makers. The cars featured are predominantly road vehicles, though the Porsche 917 and Ferrari Type 340/375 are among a few notable racing examples included.

More than 200 photographs (many of them in colour) create a kaleidoscopic visual effect, along with a large number of colour paintings. Some of the latter will be recognised by the *cognoscenti* as plans and elevations that first saw the light of day in the Profile Publications car booklets of the 1960s, while we found the wheel angles and positions on several of the perspective colour drawings to be irritatingly unrealistic. Nevertheless this is a competent, well produced six-quid's-worth.

British Specialist Cars — Vol 2: Roadsters, Replicas and Fun Cars, by Peter Filby. Published by Bookstop, Holmerise, Seven Hills Road, Cobham, Surrey. Price £3.85.

IF YOUR interest is cars, and in particular some of the more unusual current models, then this pleasant paperback will appeal. As its title implies, it covers roadsters (like the Arkley), replicas (like the Deetype) and fun cars (like the Siva Edwardian Raceabout), though it isn't always that easy to categorise the 33 vehicles written up and illustrated in this volume. From a strict modelling viewpoint, one would have appreciated even more pictures, some plans, and preferably leading dimensions, but that is being a little hyper-critical in view of the market at which the book is obviously aimed.



LETTERS TO THE EDITOR

WW1 material

IN SPITE of the enormous success of your free classified advertisement section and the incredible bias you have against World War 1 aviation (the May issue of the magazine *again* had hardly any articles about the Turkish Flying Corps at the Dardanelles) can I make a plea for that small but dedicated band of good-humoured, patient, thoughtful and exquisitely skilled (as well as modest) group of modellers who concentrate on World War 1 aviation?

Those of us who indulge in the hobby of constructing World War 1 aircraft models are generally reduced to scratch-building or else (when skill is lacking) to sauntering casually into tiny sub post offices with a few plastic kits in the window in the hope that some long-forgotten treasure lies dust gathering on a high shelf. From time to time one also finds a fellow enthusiast who just happens to have 97 boxes of the Renwal Pfalz DIII for disposal but didn't know anyone who wanted them.

After some extremely couth conversation with others of a like interest, it has been suggested that a 'Sales and Wants' list would be quite useful. As I can hardly expect *Airfix Magazine* to make six pages a month available for such a valuable service to humanity, I have agreed that I will run such a thing (on a completely non-commercial basis insofar as New Hope Design is concerned) for those interested.

Could I therefore ask anyone who reads *Airfix Magazine* who also is interested in World War 1 aviation and wishes to acquire or dispose of any kits, books or anything else to do with the subject to contact me. All I need is a copy of their advertisement and a stamped and addressed envelope so that we can send out a list in due course. I would stress that this is in no way a formal thing — it is purely a service for hobbyists. The list will

be produced as and when and all subscribers will deal direct with each other. No commercial ads please and please make any insertions as clear and concise as possible.

David Winter, Managing Director, New Hope Design, Rothbury, Northumberland NE65 7QJ. (I hope you enjoyed Harry Woodman's feature in our June issue, David. Ed.)

Duxford rally

MILITARY ENTHUSIASTS in East Anglia should make a diary note that last year's successful military vehicle rally is being repeated at Duxford on August 6, and we just hope that the weather shows an improvement! Ed.

RAF Washingtons

I AM COMPILING a pictorial history of the Boeing Washington in RAF service between 1950 and 1958. I would be most grateful if any of your readers possessing photographs would make them available for copying. All material will be treated carefully and returned.

Peter Finch, 73 Malvern Way, Croxley Green, Herts WD3 3QQ.

USS Conyngham

AS A REGULAR reader of *Airfix Magazine* for nearly four years, I never look through the letters to the editor columns (which I think is an excellent idea) without wishing that I had something to send. Some time ago I found something which might interest other readers; even though I am mostly interested in aircraft, I never let a chance slip to get a look at a Naval vessel.

Every year on the Fourth of July an American naval vessel visits Aalborg to represent the USA at the annual celebration. The festival is held in Rebild, not far from Aalborg. The USS Conyngham DDG-17 arrived on July 2 1977 — America's



bicentennial year. Visitors were invited on board and shown around. As I also have photography as a hobby I naturally took my camera along, and as my father has a dark room I can borrow it is no trouble for me to develop my own pictures. The weather was fine and sunny and I got some good shots. I hope they will be published. On board I received a booklet giving the history, dimensions, armament of the ship, and also some pictures. I hope that this information also will be of some value to the readers.

Kenneth Bladt Knudsen, Skalborg, Denmark.

Help the aged

THIS SUMMER Help the Aged is launching a scheme to use the crafts and skills of young and old, fit and housebound, to raise desperately needed funds to provide medical care, housing, day centres, mini-buses and so on for the aged in Britain, and food, shelter, clothing and medical care for the destitute aged in the Third World.

The name of the scheme is PLUS, and it is hoped that before long Help the Aged's PLUS-people will be operating it nation-wide.

The idea behind the scheme is that anyone who enjoys making things — rag-dolls, knitted baby clothes, jam, wooden toys, chutney, patchwork, paintings, models, crochetwork, pottery, in fact anything at all — and would like to use their skill to contribute to the welfare of old people in need all over the world, will be put in touch with their nearest PLUS-group, who will sell the gift for Help the Aged's funds. (If expense is a problem, the PLUS-group may well be able to supply materials). In some localities, gifts made by school and pre-school children will be personally delivered, as birthday presents, to lonely old people in the area, with a special certificate awarded to every child donating a 'Gift for Gran'.



Above right Three views taken on board the USS Conyngham showing the forward 5-inch gun position, Asroc launcher and gun director/radar. Left Superbly constructed model of the Airfix Sovereign of the Seas built over a period of six years by Mr John Bray of Peterlee, Co Durham. It features cloth sails and complete rigging, details of which were provided by Mr R. C. Anderson, author of *Seventeenth Century Rigging*.

The symbol of the scheme is the PLUS-label which will be attached to every item donated to Help the Aged's PLUS-groups.

In addition to handling the sale, or presentation, of home-made gifts, the PLUS-groups of each area will be involved in arranging coffee-mornings, fashion-shows, jumble sales, carnival shows and sponsored events — all occasions which combine good fun and the opportunity of making new friends for everyone taking part with a valuable contribution to Help the Aged's work.

PLUS-groups will operate through the existing network of voluntary helpers, in over 50 towns throughout the country, who already collect under Help the Aged's 'Penny-a-Day' scheme. Anyone interested in finding out more about PLUS should contact:

Janet South, Penny-a-Day Appeal, PO Box 111, Cambridge CB1 1EA.

Ross-shire Buffs

I FEEL PROMPTED to clear up one or two points of detail in T. H. Thomas' generally excellent article on the Ross-shire Buffs in your April issue.

Firstly I must take issue with his statement that 'beards were often worn by the British Army at this period.' Beards have never been officially

allowed in the ranks but during the terrible winter of 1854-1855 many of the men in the Crimea grew extra facial hair. After the war the veterans were granted permission to retain their beards but by the period this uniform depicts it would be imagined that examples of bearded soldiery would be few and far between. In any case, as the 78th did not serve in the Crimea, there would be no excuse for any of its soldiers sporting beards.

Secondly, I was under the impression that only the Gordon Highlanders wore black buttons on their spats and that all the other Highland regiments wore white ones. I admit that I am not 100 per cent certain of this but it sticks in my memory that the Gordon's black buttons are worn in memory of some dead general — probably Wolfe, it usually is.

Finally, one small point: I am sure that the Queen's Own Highlanders would not accept that the Ross-shire Buffs are completely dead. Their museum at Fort George houses several exhibits of this regiment and all the others that have been amalgamated to live on under the new title.

I hope my comments will be taken as in no way criticising an interesting article which I, personally, found very stimulating.

Ian Rice, Marple Bridge, Cheshire.

Foxed by an Osprey

I WOULD LIKE to point out a mistake made by Brenda Lewis in the April issue on page 453 over the spotter aircraft carried by HMS Ajax in 1935. As the prototype Seafox did not fly until May 27 1936 and the first production aircraft until April 1937 there is just no way the aircraft can be a Seafox. From its appearance (pointed nose and single bay wings, etc) it is quite obviously a Hawker Osprey, which was equipping the unit supply aircraft to No 2 Cruiser Squadron in 1935.

Of course, by 1939 the Seafox was in service and carried out its famous exploit at the River Plate battle. (By the way, does anyone know what the serial and markings of Ajax's Seafox were? I would love to know.)

I was also interested in your article on the Grey Goose gunboats. I was surprised that no mention was made of the fact that Peter Scott (as he was then) skippered her during World War 2 and 'Grey Goose' was his choice of name. Whether he started the trend of 'Grey' names or the Navy first decided on the series I couldn't say, but Sir Peter is credited with doing it.

D. Thompson, Tottenham, London.

(Thanks also to the many other readers who have written in about our Seafox/Osprey mixup. Ed.)

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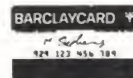
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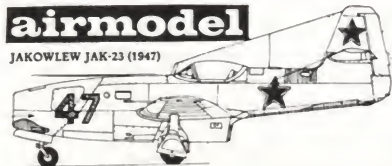
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